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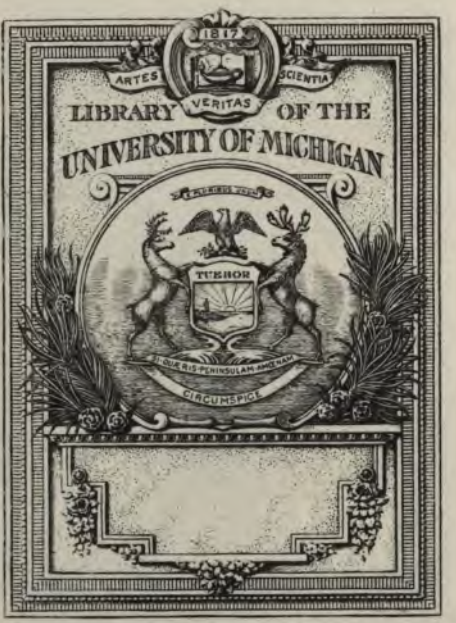
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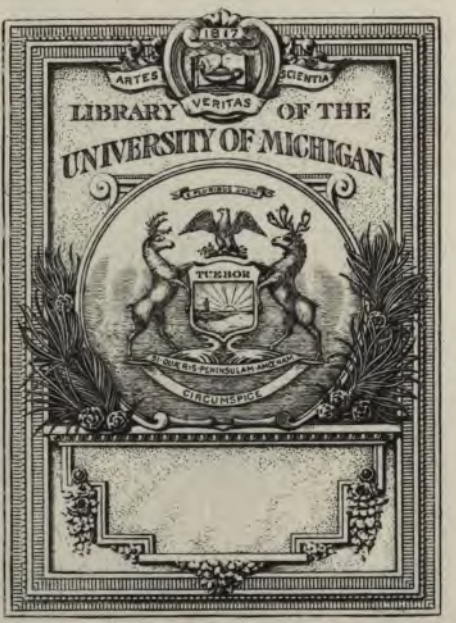
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THE MEANING OF EDUCATION

CONTRIBUTIONS TO A PHILOSOPHY OF EDUCATION

BY

NICHOLAS MURRAY BUTLER

PRESIDENT OF COLUMBIA UNIVERSITY
MEMBER OF THE AMERICAN ACADEMY OF ARTS AND LETTERS

REVISED AND ENLARGED EDITION

NEW YORK
CHARLES SCRIBNER'S SONS
1915

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Published November, 1915

TO ALL THOSE MEMBERS OF COLUMBIA UNIVERSITY, PAST AND PRESENT, WHO HAVE AIDED IN MAKING IT A CENTRE OF ENLIGHTENMENT, OF PRODUCTIVE SCHOLARSHIP AND OF HUMAN SERVICE AND WHO IN SO DOING HAVE MADE PLAIN THE MEANING OF EDUCATION IN A DEMOCRACY

PUBLISHER'S NOTE

In the present revised and enlarged edition of *The Meaning of Education*, two chapters that were included in the former edition (1898) are omitted: "Democracy and Education" and "The Reform of Secondary Education in the United States."

The following chapters, which did not appear in the former edition, are included in the revised and enlarged edition: "Five Evidences of an Education"; "Training for Vocation and for Avocation"; "Standards"; "Waste in Education"; "The Conduct of the Kindergarten"; "Religious Instruction and Its Relation to Education"; "The Scope and Function of Secondary Education"; "The Secondary School Programme"; "The American College and the American University"; "The Place of Comenius in the History of Education"; "Status of Education at the Close of the Nineteenth Century"; "Some Fundamental Principles of American Education"; "Education in the United States"; "Discipline and the Social Aim in Education."

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I

INTRODUCTION

INTRODUCTION

There are two ways of presenting a reasoned view of the principles and practise of education. One way is to treat the whole field of educational theory and practise in highly systematic and logical form. The other and less formal way is to present the underlying principles of an educational philosophy, and then to apply these principles to various practical educational and social problems which have present interest and importance. It is this second way that has been followed in the present instance. The foundations of an educational philosophy are first suggested, and then in different ways and from various points of view application of this philosophy is made to a number of questions which constantly arise in the life of the individual, of the school, and of the community.

An empirical education is futile. The only education that can serve the state and enrich the life of the individual and the family is one which rests upon a reasoned and tested foundation of principle, and which proceeds toward a

clearly defined and well-understood aim. A sound education rests upon a sound philosophy.

The convictions and opinions on the subject of education that are brought together in this volume are the result of many years of reflection, experience, and observation. Time has only served to strengthen the belief that they are sound and capable of reasonable defense and explanation.

Fundamental assumptions

The belief that controls these convictions and opinions is threefold: First, that education, in the broad sense in which the term is here used, is the most important of human interests, since it deals with the preservation of the culture and efficiency that we have inherited and with their extension and development; second, that this human interest can and should be studied in a scientific spirit and by a scientific method; and, third, that in a democracy at least an education is a failure that does not relate itself to the duties and opportunities of citizenship, with all that that term implies.

Distinction between education and instruction

Education is sharply distinguished, therefore, from the far narrower field of instruction, as that in turn is broader than the field of school life. To give to education its rightful place in our thinking involves relating it to the

laws of life in general, and especially to those laws as viewed from the standpoint of the doctrine of evolution. This I have aimed to do by proposing an extension of the commonly received doctrine of infancy, which though as old as early Greek philosophy,[1] owes its definite statement and exemplification to Mr. John Fiske.[2] In this way the theory of education is given what it has hitherto lacked, a distinct relationship to the facts of organic and social evolution.

The doctrine of infancy

A standard must next be sought by which the value of educational processes and influences may be judged. I find this standard in the conclusion, common, I am confident, to the best philosophy and to the soundest science alike, that the facts of nature must be explained, in the last resort, in terms of energy, and that energy in turn can be conceived only in terms of will, which is the fundamental form of the life of mind or spirit.

Will as the fundamental form of the life of mind

These two conclusions are offered as the basis for an educational philosophy. With them in mind a number of concrete problems that are of present importance not to teachers alone,

[1] Butler, "Anaximander on the Prolongation of Infancy in Man," in *Classical Studies in Honor of Henry Drisler* (New York, Columbia University Press, 1894).

[2] See *The Meaning of Infancy* (Boston, 1909).

but to thoughtful parents and to conscientious citizens, are discussed in detail.

Study of education as a science

It is sometimes hastily objected that the attempt to formulate a scientific study of education is impossible. This objection rests upon a misunderstanding as to what a science is. Science is wholly a matter of method; it is knowledge classified, and nothing more. The knowledge so classified may be knowledge of plants, or of heavenly bodies, or of the human body, or of forms of government, or of education, or of anything else in the known world of relations and related objects. Only the sciences based upon mathematics are exact or lay claim to exactness; all others are descriptive only, and wider experience or further observation may modify their conclusions at any time. A science of education is analogous to a science of medicine. Both are built upon a group of ancillary sciences, and both arrive at conclusions that are only working hypotheses. With normal children, as with normal patients, these hypotheses, based as they are upon wide experience, require little or no modification; in abnormal cases, however, they must be modified or sometimes even abandoned. Neither medicine nor education makes any pretense to exactness.

It is highly important for the study of education that a consistent nomenclature be adopted and used, though for a variety of reasons this is a difficult task to accomplish. Bearing in mind this need, I have endeavored to mark off different types or grades of educational institutions from each other, and to give to each its appropriate name. Many American educational problems that appear very complex would become much simpler if the various institutions giving systematic instruction were always called each by its right name.

Education and philosophy

The serious student of education must, as has already been indicated, be a serious student of philosophy as well. In America, philosophy has been for some time past in a parlous state. A generation arose that knew not philosophy, but that was very desirous of continuing to use the name. In various forms and with varying degrees of vigor, philosophy has been repudiated in quasi-philosophical language. The intellectual sincerity of the expounders of what is called Pragmatism has diverted attention from the fact that Pragmatism is not a philosophy at all, but rather a denial that philosophy can exist. With the title of the New Realism, a group of younger writers and teachers has thought it worth while to repeat

with no little ingenuity, and to endeavor to perpetuate, some of the oldest and most thoroughly exposed of philosophical errors. Both these movements are revivals of that dogmatism in philosophy which it was hoped had been put to rest forever by the criticism of Kant. Whenever a philosophical writer or teacher attempts to build up a system of philosophy without a foundation which rests upon a critical analysis of the process of knowing—what the Germans call *Erkenntnisstheorie*—it may be assumed at once that he is not contributing to philosophy, but rather attacking it with the weapons of dogmatism. Similarly, all undertakings that have for their purpose the application of scientific method to philosophy are themselves proof that the gulf which separates science and philosophy is neither understood nor measured.[1] To speak of extending scientific method to philosophy is just as little intelligible as it would be to speak of extending the metric system to political theory.

Human personality and educational theory

The dignity and worth of human personality lie at the basis of all constructive theories of education, as they lie at the basis of all constructive theories of social and political organi-

[1] See Butler, *Philosophy* (Columbia University Press, 1911), pp. 12–24.

zation and action. The development, the protection, and the enrichment of human personalities are alike the purpose of education and of those larger relationships and interdependences which constitute the state.

In a very real sense, formal education may be described as the process by which the present uses the lessons and the experience of the past to aid in meeting the needs and solving the problems of the immediate future. Education is by its very nature forward-facing. It aims to prepare human beings for life. The measure of its success will always be the understanding which it has of the terms, human being and life.

NICHOLAS MURRAY BUTLER

COLUMBIA UNIVERSITY, NEW YORK,
November 25, 1915

II

THE MEANING OF EDUCATION

An address before the Liberal Club of Buffalo, New York,
November 19, 1896

THE MEANING OF EDUCATION

Those who have an acquaintance, however cursory, with the history of human thought well remember how bitter and how persistent have been the controversies of philosophers and metaphysicians in respect to terms of every-day use. Discussions on such familiar words as substance, cause, idea, and matter have shaken the schools for ages. It seems to be a fact that when a term is somewhat unusual and remote from our experience and our interest, we are apt readily to be able to assign to it a definite significance and a concrete meaning; but when it is a term with which we are familiar in our every-day experience and conversation, we often feel its significance and its import, and yet find great difficulty in defining it accurately in logical or in scientific terms.

Relation of evolution to education

I shall discuss the meaning of Infancy and Education just because the terms are familiar, because the ideas are commonplace, and because, as it seems to me, we so often fail to grasp their profound and far-reaching significance. The point of view from which I shall

speak of them is the one given us by that remarkable generalization which has come to be known as the doctrine of evolution, a theory which we all associate with the nineteenth century, but which, nevertheless, was seen by the thinkers of the ancient world, by the lightning flashes of their genius, in what is after all very much the form in which the clear sunlight of modern scientific demonstration presents it to us. The doctrine of evolution has illuminated every problem of human thought and human action. It is a mere truism to say that it has revolutionized our thinking; but it is equally true that we have in very many cases failed to accept the consequences of the revolution and to understand them in all their important applications. It seems to me that in no department of our interest and activity is this failure more complete, speaking generally, than in that which relates to the great human institution of education.

Significance of the lengthening period of infancy

The two chief contributions that light up this doctrine from the point of view that I wish to occupy are those that were made by Mr. Alfred Russell Wallace and by Mr. John Fiske. It was Mr. Wallace who pointed out,[1]

[1] See *Natural Selection and Tropical Nature* (London, 1891), pp. 167–214.

forty odd years ago, that the theory of evolution as applied to man could sustain itself only if it were acknowledged and admitted that there came a time in the history of animal types and forms when natural selection seized upon psychical or mental peculiarities and advantages and perpetuated them rather than merely physical peculiarities and advantages. That is the first and in a sense, perhaps, the greater of these contributions, for it has enabled us to understand the place of man in the order of the cosmos. Then, in less than a generation, the remarkable insight of Mr. John Fiske explained for us on physiological and psychological grounds the part played by the lengthening period of infancy in the animal species.[1] It is from that doctrine of Mr. Fiske that I take my point of departure in the present argument.

We have come to understand that evolution regards us all as individual centres of activity, influenced by our surroundings and reacting upon them. We have come to understand that our physical, our mental, and our moral life is the gradual growth or development of what may be conceived of as a point travelling through an ever-widening series of circles, un-

[1] See *The Meaning of Infancy* (Boston, 1909).

til, in this ripe and cultivated age, the point has come to include within the circumference that it traces all that we call the knowledge or acquirement or culture of the educated man.

The doctrine of infancy, as it has been explained to us, relates itself directly to that figure and to that method of explanation. If we contrast or compare the lower orders of animal life with the higher, and particularly with the human species, we are at once struck by the fact that in the lower orders of existence there is no such thing as infancy. We observe that the young are brought into the world able to take care of themselves, to react upon their environment at the mere contact of air or food, to breathe, to digest, and to live an individual existence. We are further struck by the fact, on examining the structure of animals of that kind, that there is no nervous system or organization present, except such as is necessary to carry on what are called reflex actions. There is no central storage warehouse; there is nothing corresponding to the human brain; and there is no action possible for animals of that type in which any considerable time can elapse between the impulse which comes in from the world without and the responding or reacting movement or action on the part of the

animal itself. Each of those animals lives the life of its parents. Each of those animals, young and old alike, performs certain reflex actions with accuracy, with sureness, with despatch; no one of those animals progresses, and none develops or has a history. When we pass to animals of a higher order, however, there comes a time when our attention is attracted by those that act in an entirely different way. Their actions are more complex, more numerous, more subtle, more sustained; and, on turning again to the organism that accompanies this and makes it possible, we see at once that there is an increased complexity of structure which accompanies this increasing complexity of function. We find, as we study more highly organized types of animal existence, that, sooner or later, there comes a time when the offspring of a given animal comes into the world unable to perform many of the functions that become possible for it later. It brings with it a host of developed reflex actions, but it also brings with it many undeveloped potentialities. Its organization is not complete at the moment of birth; and a period of helplessness or infancy, longer or shorter, must result. In passing from the highest of the lower animals to man, we reach a most important

stage in the development of infancy. In man we find the increasing bulk, and more than that, the increasing complexity, of the brain and central nervous system which accompany the complex adjustments and actions that make up life. But though the human animal is born into the world complete as to certain series of reflex actions, its lungs able to breathe, its heart to beat, its blood-vessels to contract, its glands to secrete, an immense series of adjustments remains to be made. While those adjustments are being made, there is a more or less prolonged period of helplessness or infancy.

Relation of infancy to education

The meaning of that period of helplessness or infancy lies at the bottom of any scientific and philosophical understanding of the part played by education in human life. Infancy is a period of plasticity; it is a period of adjustment; it is a period of fitting the organism to its environment: first, physical adjustment, and then adjustment on a far larger and broader scale. This fitting of the organism to its environment on the larger and broader scale is the field of education. In other words, nature and heredity have so organized one side of animal life that it is complete at the time of birth. A large series of adjustments to the world around us, the series of adjustments

that in the case of man make up the life that is really worth living, constitutes the life of the mind or spirit. At birth, those adjustments are not yet made and they have to be slowly and carefully acquired. We are even born into the world with our senses, "the windows of the soul," locked, unco-ordinated, unadjusted, unable to perform what is eventually to be their function. It is a familiar fact that sight, hearing, and touch all have to be developed and trained and coeducated, taught to act together, before the infant can appreciate and understand the world of three dimensions in which adults live, and which they have supposed to be the only world known to the human consciousness. While that period of plasticity or adjustment lasts, there is naturally and necessarily a vast influence exerted, not only on the child but by the child.

Infancy as a factor in the development of the family and society

Mr. Fiske is undeniably correct in saying that the prolonged period of infancy which is necessary to bring about these adjustments lies at the foundation of the human family, and therefore at the foundation of society and of institutional life. The factor in history that has changed the human being from a gregarious animal to a man living in a monogamic family is, if anthropology and psychology teach

us anything, unquestionably the child. D
ing this long period of helplessness and
pendence, the parents of the child are k
together by a common centre of interest;
the bonds of affection and interdependence t
are eventually to constitute the family
then permanently and closely knit. T
period of mutual association and depende
of the parents extends at first over only eig
ten, or twelve years. If two, three, or f
children are born to the same parents, it n
extend over a period much longer; it may l
during one-third or even one-half of the av
age life of man. Out of that centre of dep
dence and helplessness, the family, as we kn
it, has grown; and it has been constituted,
far as we can explain it at all, by the length
ing period of infancy in the animal kingd
and in the human race. Fact after fact mi
be cited in illustration of this, from the hist
of science and from natural history, were
not wholly unnecessary. It is one of the m
profound generalizations of our modern
ence; and it has enabled us to see to the v
bottom of the meaning of education and
understand the biological significance of
of the most striking and imposing of so
phenomena.

The lengthening period of infancy

This lengthening period of infancy is a period of plasticity. No animal that has not a period of infancy needs to be educated. Every animal that has a period of infancy can and must be educated. The longer the period of infancy the more education is possible for it; and as our civilization has become more complex, as its products have become more numerous, richer, deeper, and more far-reaching, the longer we have extended that period of tutelage, until now, while the physiological period of adolescence is reached in perhaps fourteen or fifteen years, the educational period of dependence is almost twice as long. That is to say, the length of time that it takes for the human child in this generation so to adapt himself to his surroundings as to be able to succeed in them, to conquer them, and to make them his own, is almost, if not quite, thirty years. The education in the kindergarten, the elementary school, the secondary school, the college, the professional school, the period of apprenticeship in the profession before independent practise can be entered upon, is in not a few cases, now twenty-five, twenty-six, twenty-eight, or even thirty years.

The rich suggestion that this doctrine of Mr. Fiske and this conception of modern science

Education as adjustment to environment

have for us, seems to me to be this: The entire educational period after the physical adjustment has been made, after the child can walk alone, can feed itself, can use its hands, and has therefore acquired physical and bodily independence, is an adjustment to what may be called our spiritual environment. After the physical adjustment is reasonably complete, there remains yet to be accomplished the building of harmonious and reciprocal relations with those great acquisitions of the race that constitute civilization; and therefore the lengthening period of infancy simply means that we are spending nearly half of the life of each generation in order to develop in the young some conception of the vast acquirements of the historic past and some mastery of the conditions of the immediate present.

In other words, the doctrine of evolution teaches us to look upon the world around us —our art, our science, our literature, our institutions, and our religious life—as an integral part, indeed as the essential part, of our environment; and it teaches us to look upon education as the plastic period of adapting and adjusting our self-active organism to this vast series of hereditary acquisitions. So that while the child's first right and first duty are to ad-

just himself physiologically to his environment, to learn to walk, to use his hands and to feed himself, to be physically independent, there still remains the great outer circle of education or culture, without contact with which no human being is really either man or woman. The child receives first, and in a short series of years, his animal inheritance; it then remains for us in the period of education to see to it that he comes into his human inheritance. When we compare the life of the lower animal, acting solely and entirely by reflex action and instinct, with the periods of infancy and of self-determined activity of the human being, developing by reflex action, instinct, and intelligence, we get some conception of the vast difference there is between what Descartes called the animal mechanism and what we may truly look upon as the activity of the human mind.

This period of adjustment constitutes, then, the period of education; and this period of adjustment must, as it seems to me, give us the basis for all educational theory and all educational practise. It must be the point of departure in that theory and that practise, and it must at the same time provide us with our ideals. When we hear it sometimes said, "All education must start from the child," we must

add, "Yes, and lead into human civilization"; and when we hear it said, on the other hand, that all education must start from the traditional past, we must add: "Yes, and be adapted to the child." We shall then understand how the great educational systems of modern times, upon which every civilized nation is pouring out its strength and its treasure, rest upon the two corner-stones of the physical and psychical nature of the child and the traditional and hereditary civilization of the race; and how it is that the problem of the family, of the school, and of the home, is to unite those two elements so that each shall enter into and possess the other. We shall then have a conception of education which is in accord with the doctrine of evolution and which is in accord with the teachings of modern science and of modern philosophy.

The spiritual inheritance of the child

After the child comes into the enjoyment of his physical inheritance, he must be led by the family, the school, and the state into his intellectual or spiritual inheritance. The moment that fact is stated in those terms it becomes absolutely impossible for us ever again to identify education with mere instruction. It becomes absolutely impossible for us any longer to identify education with mere acqui-

sition of learning; and we begin to look upon it as really the vestibule of the highest and the richest type of living. It was the seed-thought of Plato, that inspired every word he ever wrote, and that constitutes an important portion of his legacy to future ages, that life and philosophy are identical; but he used the word philosophy in a sense which was familiar to him and to his time, and for which we might very well substitute, under some of its phases at least, the word education. Life and education are identical, because the period to which we traditionally confine the latter term is merely the period of more formal, definite, determinate adjustment; yet, just so long as life lasts and our impressionability and plasticity remain, we are always adapting ourselves to this environment, gaining power, like Antæus of old, each time we touch the Mother Earth from which civilization springs.

What is education?

If education cannot be identified with mere instruction, what is it? What does the term mean? I answer, it must mean a gradual adjustment to the spiritual possessions of the race, with a view to realizing one's own potentialities and to assisting in carrying forward that complex of ideas, acts, and institutions which we call civilization. Those spiritual

possessions may be variously classified, but they certainly are at least fivefold. The child is entitled to his scientific inheritance, to his literary inheritance, to his æsthetic inheritance, to his institutional inheritance, and to his religious inheritance. Without them all he cannot become a truly educated or a truly cultivated man.

The scientific inheritance

He is entitled to his scientific inheritance. In other words, he is entitled to go out into nature, to love it, to come to know it, to understand it; and he is entitled to go out into it, not only as the early Greek and Oriental thinkers went, with fear and trembling and worship, but he is entitled to go out into it armed with all the resources of modern scientific method and all the facts acquired by modern research. He is entitled to know how it was that we have passed from the world known to the heroes of the Iliad to the world as we know it to-day. He is entitled to know how the heavens have declared their glory to man, and how the worlds of plant and animal and rock have all come to unfold the story of the past and to enrich us with the thought and the suggestion of the intelligence, the design, the order that they manifest. There can be no sound and liberal education that is not

based in part upon the scientific inheritance of the race. The learning of the multiplication table, the learning of the necessary preliminary definitions, the learning of the necessary methods of research and practise — all these are the lower steps of the ladder, the needful steps by which we must mount; and yet they are the steps from which how often we fall back without having gained any vision whatever of the land to which they are supposed to lead! The scientific inheritance is one of the very first elements of a modern liberal education, because it is that element which presents itself earliest to the senses of the child. It is the element with which he comes in immediate sense-contact; to which he can be first led; from which he may be made to understand and draw lessons of the deepest significance for his life and for that adaptation which is his education.

The literary inheritance

Next there is the vast literary inheritance, the phase of the past that mankind has during twenty-five hundred years most loved to dwell upon. It is the side that has captivated the imagination, enshrined itself in language, and brought itself closest to the heart of cultivated man—going back to the earliest attempts at mythology and coming down to the great poetry and the great prose of the eighteenth

and nineteenth centuries in modern tongues. We have gone so far as to call this aspect of civilization the "humanities," because most of all it seems to bear upon its surface the significance of that fine old word *humanitas* which was once the ideal of liberal education. "Humanities" these studies undoubtedly are, but *humanitas* is a broader term still, and in its full significance must be made to include all our inheritance, scientific, æsthetic, institutional, and religious, as well as literary.

Just as scientific method is the gate to the scientific inheritance and therefore must in essence at least be mastered, so language is the gate to the literary inheritance and must be mastered at the earliest opportunity. We are accustomed, as a rule, to estimate and to weigh power and culture in terms of language. The mastery of various languages, the mastery even of the mother tongue, is often taken as the sole test of culture. That is our tribute to its great importance. We see how easily the mastery of a language, or of more than one, lends itself to this conception of education as an adaptation, as an adjustment, to the spiritual environment of the race.

Language is the crystallization of past thought. It contains in itself, in its products

and its forms, in its delicate discriminations, its powers of comparison and abstraction, a record of the progress of the thought of the race. When we are plodding through dreary details of grammar and of rhetoric we are again on the lower rungs of the ladder, the multiplication table of the literary inheritance, the steps that must be taken if we are to come to understand what the great world-poets and seers have revealed to us. Therefore it is that we are to-day putting the literary inheritance side by side with the scientific in the very earliest years of the education of the child. In the education that is sometimes called new, it will be found that the early linguistic exercises are almost always based upon something that is really worth knowing for its own sake. Our literatures the world over, ancient and modern, are so rich, so full of thought and feeling and action, that there is no time to waste in the merely formal exercises of grammatical drill upon lifeless material, when we may be occupying ourselves, in those same exercises and for the same purpose of discipline, with material that enriches the human mind and touches and refines the human heart. Modern education in its adjustments is bringing the child into his literary inheritance in a new

spirit. That inheritance has always been before mankind. In the Middle Ages, in early modern education, in European education today, the study of language and literature is and has been the main element in instruction. It must always hold a prominent place in education, for it admits of no substitute. Yet it is mere narrowness to say that this study alone is sufficient, and that it excludes everything else. It should come side by side with the scientific inheritance in the early life of the child, during the period of plasticity or education.

The æsthetic inheritance

The third element in education is the æsthetic inheritance, that feeling for the beautiful, the picturesque, and the sublime that has always been so great a part of human life, that contributes so much to human pleasure and accentuates so much of human pain and suffering. The ancient Greeks understood and used it, but a false and narrowing philosophy thrust it out of life and education for centuries because it was supposed to antagonize the spiritual or religious life. It was believed that the spirit could be chastened only by privation and by pain, by tearing it away from one whole side of human civilization, and by insisting that the human heart should suppress its feeling, its longing for the ideal in the realm

of feeling and of beauty. The closet philosophers could accomplish their end in education for a time, but they were utterly unable to suppress the builders of the Gothic cathedrals or the Italian painters of the Renaissance, and they have been unable to suppress the artistic element in human life. To-day we find it coming back to occupy its appropriate place. We should no longer think of applying the word cultivated to a man or woman who had no æsthetic sense, no feeling for the beautiful, no appreciation of the sublime, because we should be justified in saying, on all psychological grounds, that that nature was deficient and defective. This great aspect of civilization, this great tide of feeling that ebbs and flows in every human breast, which makes even the dull and inappreciative peasant uncover his head as he passes through the wonderful galleries of the Vatican or the Louvre —this, too, is a necessary factor in adjusting ourselves to the full richness of human conquest and human acquisition. Unless we are to be mere hewers of wood and drawers of water, we should see to it that the æsthetic inheritance is placed side by side with the scientific and the literary in the education of the human child. To-day we find art creeping

into the schoolroom; instruction in color, in form, in expression is being given. The growing child is surrounded with representations of the classic in art, and so, unconsciously and by imitation, he is being taught to adapt and adjust himself to this once forgotten and now recovered element in human civilization; an element that certainly is, like the scientific and literary elements, an integral part of the child's inheritance.

The institutional inheritance

Then there is also the wonderful institutional inheritance, perhaps the most wonderful of all, because it brings us into immediate contact with the human race itself. This is the element of civilization before which we must, for the moment, sink differences of scientific opinion, differences of literary appreciation, differences of æsthetic judgment, and by which we look upon the individual man as but a member of a larger whole, in order to understand what human civilization really means. We have always had before us, in the history of civilization, two extreme types of thought and opinion as to human institutions. We have had the view typified in modern philosophy by Rousseau, and wrought out in the streets of Paris from 1789 to 1794. This is, substantially, the view that every individual

is sufficient unto himself. It is the view of the ancient Sophists, once combated by Socrates in the streets of Athens, that there are as many truths as there are men to perceive truth, and that each individual is the sole arbiter of his own fortunes. This is what may be called the atomic view of human society, which would blow all of our institutional life into millions of atoms and deify each. That view has failed to work itself out successfully in history; when it has had a momentary victory it has simply been because it came as a reaction against the tyranny of the opposite extreme. We have had the other extreme also. We have had the view which insists that no individual is of any consequence or importance in the presence of the mass; the view that all individual peculiarity, all individual power or acquisition, must be pressed down and trampled under foot for the advantage of the whole. We have seen it in the civilization of China in the interest of ancestor worship; we have seen it in the civilization of India in the interest of the caste system; we have seen it in the civilization of Egypt in the interest of the priestly class; and we have seen those three civilizations wither and die.

We have come to understand, again follow-

ing the seed-thought of the Greeks, that the true line of institutional progress lies between the two extremes; that that conception of our institutional life is the true one which regards each of us as a unit but still as a part of a larger unit, which regards each of us as entitled to liberty but in subordination to law. We have come to regard this as the last lesson of a political philosophy that is based upon a study of human history and of human nature. The conception of liberty under the law, allowing a field for every human activity to develop and enrich itself without pulling down its fellow, all co-operating toward a common end, typifies and explains, better than any extreme theory of philosopher or sciolist, the institutional life of the race. We look back and see how that institutional life has been developed. We see the right of private property, the common law, the state, the church, the freedom of the press, education,—one great institution after another emerging from the mist of indefiniteness and taking its part in the structure of our modern life; and we say at once that no liberal education can be complete that does not include some comprehension of all that. Unless the child understands that, though he is an individual he is also a member of the

body politic, of an institutional life in which he must give and take, defer and obey, adjust and correlate, sympathize and co-operate, and that without all this there can be no civilization and no progress, we are thrown back into a condition either of anarchy—the anarchy of Rousseau—or of the collectivism and stagnation of China, India, and Egypt. We have wrested that institutional life from history, and it is going to-day into the education of children all over the civilized world. In this way they are being given their institutional inheritance; they are being given some insight not alone into their rights, which are so easy to teach, but into their duties, which are so easy to forget; and the institutional life that carries with it lessons of duty, responsibility, and the necessity for co-operation in the working out of high ideals, as well as appreciation of men's collective responsibilities, is now being put before children wherever sound education is given, from the kindergarten to the university.

The religious inheritance

Finally, there is the religious inheritance of the child. No student of history can doubt its existence and no observer of human nature will undervalue its significance. We are still far from comprehending fully the preponder-

ant influence of religion in shaping our contemporary civilization; an influence that is due in part to the universality of religion itself, and in part to the fact that it was, beyond dispute, the chief human interest at the time when the foundations of our present superstructure were being laid. It has played a controlling part in education till very recently, although it has too often played that part in a narrow, illiberal, and uninformed spirit. The progress of events during the nineteenth century, however, has resulted in greatly altering the relation of the religious influence in education—at first to education's incalculable gain, and, more recently, to education's distinct loss. The growing tendency toward what is known as the separation of church and state, but what is more accurately described as the independence of man's political and religious relationships, and, concurrently, the development of a public educational conscience which has led the state to take upon itself a large share of the responsibility for education, have brought about the practical exclusion of the religious element from public education. This is notably true in France and in the United States. In the state school system of France, all trace of religious instruction has been lack-

ing since 1882; and it is hard to dignify with the names influence or instruction the wretchedly formal religious exercises that are gone through with in American public schools.

The result of this condition of affairs is that religious teaching is rapidly passing out of education entirely; and the familiarity with the English Bible as the greatest classic of our tongue, that every cultivated man owes it to himself to possess, is becoming a thing of the past. Two solutions of the difficulty are proposed. One is that the state shall tolerate all existing forms of religious teaching in its own schools, time being set apart for the purpose. The other is that the state shall aid, by money grants, schools maintained by religious or other corporations. Neither suggestion is likely to be received favorably by the American people at present, because of the bitterness of the war between the denominational theologies. Yet the religious element may not be permitted to pass wholly out of education unless we are to cripple it and render it hopelessly incomplete. It must devolve upon the family and the church, then, to give this instruction to the child and to preserve the religious insight from loss. Both family and church must become much more efficient, educationally speaking, than

they are now, if they are to bear this burden successfully. This opens a series of questions that may not be entered upon here. It is enough to point out that the religious element of human culture is essential; and that, by some effective agency, it must be presented to every child whose education aims at completeness or proportion.[1]

Infancy and education

The period of infancy is to be used by civilized men for adaptation along these five lines, in order to introduce the child to his intellectual and spiritual inheritance, just as the shorter period of infancy in the lower animals is used to develop, to adjust, and to co-ordinate those physical actions which constitute the higher instincts, and which require the larger, the more deeply furrowed, and the more complex brain. With this adaptation to the intellectual and spiritual inheritance of the child there must go, of course, such physical training and such systematic care for his health as will serve to provide a sufficient and satisfactory physical foundation for a happy and useful intellectual and spiritual life.

That, as it seems to me, is the lesson of biology, of physiology, and of psychology, on the basis of the theory of evolution, regarding the

[1] See pp. 179–200.

meaning and the place of education in modern life. It gives us a conception of education which must, I am quite sure, raise it above the mechanical, the routine, the purely artificial. We see that this period of preparation is not a period of haphazard action, a period of possible neglect, or a period when time may be frittered away and lost, but that every moment of adjustment is precious and that every new adaptation and correlation is an enrichment not only of the life of the individual but of the life of the race. For now we all understand perfectly well that this long period of infancy and adaptation, this period of plasticity and education, is that which makes progress possible. That is why it is entirely correct to say that each generation is the trustee of civilization. Each generation owes it to itself and to its posterity to protect its culture, to enrich it, and to transmit it. The institution that mankind has worked out for that purpose is the institution known as education. When a child has entered into this inheritance, first physical, then scientific, literary, æsthetic, institutional, and religious, then we may use the word culture[1] to signify the state that has been attained.

[1] In the German language the word *Kultur* is given a quite different meaning. The nearest German equivalent to culture as here used is *Bildung*.

The meaning of culture

The word culture is very modern. It is used in its present sense only during the latter portion of the eighteenth century and during our own. It owes its present significance largely to Goethe and to Herder, the two men who did most to make it familiar in its modern sense. But while the word may be new, the conception itself is old. It is the παιδεία of the Greeks, the *humanitas* of the Romans; and after all it expresses pretty much what the patrician Roman, dwelling in his country house, had in mind when he sent his boy, after giving him some instruction in agriculture, in law, and in military duty, to the great city of Rome itself in order to obtain *urbanitas*, city-ness. We have softened that word down until it means merely polished manner, but when the Romans first used it they meant by it pretty much what we mean by culture. The conception of culture is old, therefore; it has always been before the idealists of the human race from the earliest times. We have given to this new word rich, full, and diversified meaning, based, as I say, upon the knowledge of the child and upon the knowledge of the historic past. When we use it in that sense, we are using it, as we may properly, to indicate the ideal of our modern education.

Adaptation to the intellectual and spiritual environment, the attainment of true culture, is not an end in itself, but a necessary preparation for the realization of one's own personality, and for rendering the highest and best type of service to mankind. The intellectual and spiritual environment is not to be conceived of as something fixed and complete, but rather as something growing and alive, to which it is in the power of every human being to make some addition, however trifling. These additions are the material of true progress. The purpose of education is to provide the largest possible number of human beings with that genuine culture which will enable them to understand the meaning of progress and to contribute to it. This progress may take any one of a myriad forms. It may be faithfulness in inconspicuous labor, it may be a new and striking product of handiwork, it may be human service to one's fellows in any one of a thousand ways. Progress based upon culture is surely progress; without culture and all that the word is here held to signify, progress is only an empty word.

III

WHAT KNOWLEDGE IS OF MOST WORTH?

Presidential address before the National Educational Association at Denver, Colorado, July 9, 1895

WHAT KNOWLEDGE IS OF MOST WORTH?

The student of history is struck with the complexity of modern thought. From the dawn of philosophy to the great Revival of Learning the lines of development are comparatively simple and direct. During that period one may trace, step by step, the evolution of the main problems of thought and action, and discover readily how the theories of the seers stood the test of application by the men of deeds. At Athens during the great fifth century the inner life was the chief part of life itself. In that age of the world life was simple; and often, because of its refinement and independence, more reflective than with us. Men's ideals were more sharply defined and more easily realizable. They did not doubt that the world existed for them and their enjoyment. Even that relatively advanced stage of human culture of which Dante is the immortal exponent, believed, as Mr. John Fiske says,[1] that "this earth, the fair home of man, was placed in the centre of a universe wherein

[1] *The Destiny of Man* (Boston, 1887), p. 12.

all things were ordained for his sole behoof: the sun to give him light and warmth, the stars in their courses to preside over his strangely checkered destinies, the winds to blow, the floods to rise, or the fiend of pestilence to stalk abroad over the land—all for the blessing, or the warning, or the chiding, of the chief among God's creatures, Man." With such a conception as this, theory and practise could be closely related. In the ancient world it was not unusual to find the thought of the disciple guided implicitly by the maxim of the master. Γνῶθι σεαυτόν and *Nil admirari* were preached by the early philosophers in the confident belief that they could be practised by him who would.

The complex modern world

In these modern days all this is changed. Man has come to doubt not only his supremacy in the universe, but even his importance. He finds that, far from dwelling at the centre of things, he is but "the denizen of an obscure and tiny speck of cosmical matter quite invisible amid the innumerable throng of flaming suns that make up our galaxy." A flood of new knowledge has appealed to human sympathy and interest, and has taxed them to the utmost. Galileo with his telescope has revealed to us the infinitely great; and the compound microscope of Jansen has created, as out

of nothing, the world of the infinitely small. Within a generation or two biology has been created; and physics, chemistry, and geology have been born again. The first wave of astonishment and delight at these great revelations has been succeeded by one of perplexity and doubt in the presence of the wholly new problems that they raise. The old self-assurance is lost. Men first stumble, blinded by the new and unaccustomed light, and then despair. The age of the faith and assured conviction of Aquinas was followed by the bold and cynical scepticism of Montaigne; and this in turn—for scepticism has never afforded a resting-place for the human spirit for more than a moment—has yielded to the philosophy of disenchantment and despair of a Schopenhauer and the morbidly acute and unsatisfying self-analysis of an Amiel. Already it is proclaimed by Nordau and his school that we are in an age of decadence, and that many of our contemporary interpreters of life and thought—Wagner, Tolstoi, Ibsen, Zola, the pre-Raphaelites—are fit subjects for an insane ayslum. Mankind is divided into warring camps, and while electricity and steam have bound the nations of the earth together, questions of knowledge and of belief have split up every nation into sects.

In all this tumult it is difficult to catch the sound of the dominant note. Each suggested interpretation seems to lead us further into the tangled maze, where we cannot see the wood for the trees. Standards of truth are more definite than ever before; but standards of worth are strangely confused, and at times even their existence is denied.

Hegel and Herbert Spencer

Amid all this confusion, however, a light has been growing steadily brighter for those who have eyes to see. In our own century two great masters of thought have come forward, offering, like Ariadne of old, to place in our hands the guiding thread that shall lead us through the labyrinth—the German Hegel and the Englishman Herbert Spencer. And as the nineteenth century closes, amid the din of other and lesser voices, we seem to hear the deeper tones of these two interpreters swelling forth as representative of the best and most earnest endeavors, from two totally different points of view, of human seekers after light. Each has taken the whole of knowledge for his province, each has spread out before us a connected view of man and his environment, and each would

> ". . . assert Eternal Providence
> And justify the ways of God to men."

These great teachers typify the catholicity and the scientific method that are so characteristic of the best expressions of our modern civilization. Whatever of insight we have gained into history, into philosophy, into art, and into nature, they have incorporated in their systematic thinking and have endeavored to illumine with the light of their controlling principles. Hegel, schooled in the teachings of Kant and of Fichte, and coming early to an appreciation of the seed-thought of Plato and Aristotle, Bruno and Spinoza, has taught us in unmistakable language that independent, self-active being is the father of all things. Spencer, feeling the thrill of that unity which makes the cosmos one, and receiving from Lamarck and Von Baer the hint that led him to see that the life of the individual furnishes the clew to the understanding of the life of the aggregate, whether natural or social, has formulated into a single and understandable law of progress the terms of that development, or evolution, which has been more or less dimly before the mind of man since thought began. The German with his principle of self-activity, and the Englishman with his law of evolution, offer us a foothold for our knowledge and our faith, and assure us that it will safely support them.

From the one we learn the eternal reasonableness of all that is or can be, while the other teaches us the character of the process by which the visible universe, that every day presents new wonders to our gaze, has been builded out of the primeval star-dust. At their hands the two sublime and awe-inspiring verities of Kant—the starry heavens above and the moral law within—find their places in the life of the spirit, and together testify to its eternity and its beauty.

The primacy of reflective thought

Despite the fact that our age is one of unexampled scientific and industrial progress, yet nothing in all our modern scientific activity is more striking than the undisputed primacy of thought—thought not in antagonism to sense, but interpretative of the data of sense. Idealism, shorn of its crudities and its extravagances, and based on reason rather than on Berkeley's analysis of sense-perception, is conquering the world. What Plato saw, Descartes, Leibniz, Kant, and Hegel have demonstrated. The once-dreaded materialism has lost all its terrors. Science itself has analyzed matter into an aggregate of dynamical systems, and speaks of energy in terms of will. The seemingly inert stone that we grasp in our hand is in reality an aggregate of an infinite number of

rapidly moving centres of energy. Our own will is the only energy of whose direct action we are immediately conscious, and we use our experience of it to explain other manifestations of energy to ourselves. Modern mathematics, that most astounding of intellectual creations, has projected the mind's eye through infinite time and the mind's hand into boundless space. The very instants of the beginnings of the sun's eclipses are predicted for centuries and æons to come. Sirius, so distant that the light from its surface, travelling at a rate of speed that vies with the lightning, requires more than eight and one-half years to reach us, is weighed, and its constituents are counted almost as accurately as are the bones of our bodies. Yet in 1842 Comte declared that it was forever impossible to hope to determine the chemical composition or the mineralogical structure of the stars. An unexpected aberration in the motions of Uranus foretold an undiscovered planet at a given spot in the sky, and the telescope of Galle, turned to that precise point, revealed to the astonished senses what was certain to thought. But yesterday a discrepancy in the weight of nitrogen extracted from the air we breathe, led Lord Rayleigh, by an inexorable logic, to the dis-

covery of a new atmospheric constituent, argon. The analytical geometry of Descartes and the calculus of Newton and Leibniz have expanded into the marvellous mathematical method—more daring in its speculations than anything that the history of philosophy records—of Lobachevsky and Riemann, Gauss and Sylvester. Indeed, mathematics, the indispensable tool of the sciences, defying the senses to follow its splendid flights, is demonstrating to-day, as it has never been demonstrated before, the supremacy of the pure reason. The great Cayley—who has been given the proud title of the Darwin of the English school of mathematicians—said a few years ago:[1] "I would myself say that the purely imaginary objects are the only realities, the ὄντως ὄντα, in regard to which the corresponding physical objects are as the shadows in the cave; and it is only by means of them that we are able to deny the existence of a corresponding physical object; and if there is no conception of straightness, then it is meaningless to deny the conception of a perfectly straight line."

The physicist, also, is coming to see that his principle of the conservation of energy in its

[1] Presidential address, British Association for the Advancement of Science, Southport, 1883.

various manifestations is a new and startling proof of the fundamental philosophical principle of self-activity. Energy manifests itself as motion, heat, light, electricity, chemical action, sound. Each form of its manifestation is transmutable into others. The self-active cycle is complete.

But it is not from the domain of natural science alone that illustrations of the all-conquering power of thought can be drawn. The genius of Champollion has called to life the thoughts and deeds of Amenotep and Rameses; and what appeared to sense as rude decorative sketches on the walls of temple and of tomb are seen by the understanding to be the recorded history of a great civilization in the valley of the Nile. The inscrutable Sphinx, that watch-dog of the Pyramids, "unchangeable in the midst of change," which sat facing the coming dawn for centuries before the storied siege of Troy, now looks down on modern men who write the very words of its builders in the language of Shakspere and of Milton. The cries of savage man, the language-symbols of the early Aryans, and the multiform and complicated tongues of modern Europe, all so seemingly diverse to the ear and to the eye, have been the foundation for the sure laws of

comparative philology that the labors of Bopp and Grimm and Verner have erected upon them. All these, and the many triumphs like them, are victories of insight; each marks a new stage in the conquering progress of the reason, by which it finds itself in every part and in every phase of the cosmos and its life.

The insight as to self-activity and the primacy of reflective thought, I regard as the profoundest that philosophy has to offer; and, instead of being urged, as in centuries past, in antagonism to the teachings of science, it is now becoming the joint conclusion of philosophy and science together. It is thought that pulsates in the world's grandest poetry and in its most exquisite art. It is the very soul of the verse of Homer and of Dante, of Shakspere and of Goethe. It makes the marble of Phidias glow with life, and it guides the hands of Raphael and Michael Angelo as they trace their wondrous figures with the brush. It gives immortality to the most beautiful of temples, the Parthenon; and it is the inspiration of that superb mediæval architecture, which bears the name of the conquerors of Rome, and which has given to Northern Europe its grandest monuments to the religious aspiration and devotion of the Middle Ages.

Philosophy and education

What, then, does this primacy of thought signify, and what is its bearing upon our educational ideals? Obviously the possession of a conclusion such as this, wrested from nature by the hand of science and from history by that of philosophy, must serve in many ways to guide us in estimating the importance of human institutions and of educational instruments. We cannot accept either of these, without question, from the hands of a tradition to which our modern philosophy and our modern science were wholly unknown; nor can we blindly follow those believers in a crude psychology who would present us with so many mental faculties to be trained, each by its appropriate formal exercise, as if they were sticks of wood to be shaped and reduced to symmetry and order. Mental life, as Wundt so forcibly says, "does not consist in the connection of unalterable objects and varying conditions: in all its phases it is process; an active, not a passive, existence; development, not stagnation." [1] Herein is mental life true to nature. Like nature, it is not fixed, but ever changing, and this unceasing change, necessary to both growth and development,

[1] *Lectures on Human and Animal Psychology* (New York, 1894), p. 454.

gives to life both its reality and its pathos. It also gives to education its unending character, and to mankind the clew to education's wisest processes.

Standards of value in knowledge

The question that I am asking—what knowledge is of most worth?—is a very old one, and the answers to it which have been handed down through the centuries are many and various. It is a question which each age must put to itself, and answer from the standpoint of its deepest and widest knowledge. The wisest philosophers have always seen, more or less clearly, the far-reaching character of the question and the great importance of the answer. Socrates and Plato, Augustine and Aquinas, were under no illusions as to it; but often in later years the deeper questions relating to the relative worth of subjects of study have been either entirely lost sight of or very superficially dealt with. Bacon clothes in attractive axiomatic form some very crude judgments as to the relative worth of studies. Rousseau outlines an educational programme that ruined his reputation for sobriety of judgment. Herbert Spencer turns aside for a moment from his life-work to apotheosize science in education, although science is, by his own definition, only partially unified knowledge. Whewell

exalts mathematics in language only less extravagant than that in which Sir William Hamilton decries it. In similar fashion, others, holding a brief for some particular phase or department of knowledge, have come forward crying Eureka! and proclaiming that the value of all studies must be measured in terms of their newly discovered standard. The very latest cry is that studies and intellectual exercises are valuable in proportion as they stimulate enlarged brain-areas, thus making the appreciation of Shakspere, of Beethoven, and of Leonardo da Vinci solely a function of the circulation of the blood.

Knowledge of the things of the spirit

But to sciolists of this type philosophy and science can now make common answer. If it be true that spirit and reason rule the universe, then the highest and most enduring knowledge is of the things of the spirit. That subtle sense of the beautiful and the sublime which accompanies spiritual insight, and is part of it—this is the highest achievement of which humanity is capable. It is typified, in various forms, in the verse of Dante and the prose of Thomas à Kempis, in the Sistine Madonna of Raphael, and in Mozart's Requiem. To develop this sense in education is the task of art and literature, to interpret it is the work of philosophy,

and to nourish it the function of religion. Because it most fully represents the higher nature of man, it is man's highest possession, and those studies that directly appeal to it and instruct it are beyond compare the most valuable. This has been eloquently and beautifully illustrated by Brother Azarias. "Take a Raphael or a Murillo," he says.[1] "We gaze upon the painted canvas till its beauty has entered our soul. The splendor of the beauty lights up within us depths unrevealed, and far down in our inner consciousness we discover something that responds to the beauty on which we have been gazing. It is as though a former friend revealed himself to us. There is here a recognition. The more careful has been our sense-culture, the more delicately have our feelings been attuned to respond to a thing of beauty and find in it a joy forever, all the sooner and the more intensely do we experience this recognition. And therewith comes a vague yearning, a longing as for something. What does it all mean? The recognition is of the ideal." Toward the full recognition and appreciation of this insight into the great works of the spirit, whether recorded in literature, in art, or in institutional life, higher education

[1] *Phases of Thought and Criticism* (New York, 1892), pp. 57, 58.

should bend all its energies. The study of philosophy itself, or the truly philosophic study of any department of knowledge—however remote its beginnings may seem to be—will accomplish this end. The ways of approach to this goal are as many as there are human interests, for they are all bound together in the bonds of a common origin and a common purpose. The attainment of it is true culture, as Matthew Arnold has defined it: "the acquainting ourselves with the best that has been known and said in the world, and thus with the history of the human spirit." [1]

Humanism

We now come in sight of the element of truth and permanence in that Humanism which Petrarch and Erasmus spread over Europe with such high hopes and excellent intentions; but which Sturm, the Strassburg schoolmaster, reduced to the dead, mechanical forms and the crude verbalism that bound the schools in fetters for centuries. Of Humanism itself we may say, as Pater says of the Renaissance of the fifteenth century, that "it was great rather by what it designed than by what it achieved. Much which it aspired to do, and did but imperfectly or mistakenly, was accomplished in what is called the *éclaircissement* of the eight-

[1] Preface to *Literature and Dogma* (New York, 1889), p. xi.

eenth century, or in our own generation; and what really belongs to the revival of the fifteenth century is but the leading instinct, the curiosity, the initiatory idea."[1]

Humanism and science

Many of the representative Humanists were broad-minded men whose sympathies were with learning of every kind. Erasmus himself writes with enthusiasm of other branches of knowledge than literature. "Learning," he says, "is springing up all around out of the soil; languages, physics, mathematics, each department thriving. Even theology is showing signs of improvement."[2] But unfortunately this broad sympathy with every field of knowledge was not yet wide-spread. The wonders and splendor of nature that had brought into existence the earliest religions and the earliest philosophies were now feared and despised as the basis of paganism; and on wholly false grounds a controversy was precipitated as to the relative worth of literature and of science that in one form or another has continued down to our own day. The bitterness with which the controversy has been carried on, and the extreme positions assumed by the partisans of the one side or the other, have concealed from view

[1] Pater, *The Renaissance* (New York, 1888), p. 34.
[2] Froude, *Life and Letters of Erasmus* (New York, 1894), p. 186.

the truth that we are now able to perceive clearly—the truth that the indwelling reason, by whom all things are made, is as truly present, though in a different order of manifestation, in the world of nature as in the world of spirit. One side of this truth was expressed by Schelling when he taught that nature is the embryonic life of spirit, and by Froebel when he wrote: "The spirit of God rests in nature, lives and reigns in nature, is expressed in nature, is communicated by nature, is developed and cultivated in nature."[1] The controversy as to the educational value of science, so far, at least, as it concerns educational standards and ideals, is, then, an illusory one. It is a mimic war, with words alone as weapons, that is fought either to expel nature from education or to subordinate all else in education to it. We should rather say, in the stately verse of Milton:

> "Accuse not Nature: she hath done her part;
> Do thou but thine."

And that part is surely to study nature joyfully, earnestly, reverently, as a mighty manifestation of the power and grandeur of the

[1] *Education of Man*, translated by W. N. Hailmann (New York, 1887), p. 154.

same spirit that finds expression in human achievement. We must enlarge, then, our conception of the humanities, for humanity is broader and deeper than we have hitherto suspected. It touches the universe at many more points than one; and, properly interpreted, the study of nature may be classed among the humanities as truly as the study of language itself.

Science as one of the humanities

This conclusion, which would welcome science with open arms into the school and utilize its opportunities and advantages at every stage of education, does not mean that all studies are of equal educational value, or that they are mutually and indifferently interchangeable, as are the parts of some machines. It means rather that the study of nature is entitled to recognition on grounds similar to those put forward for the study of literature, of art, and of history. But among themselves these divisions of knowledge fall into an order of excellence as educational material that is determined by their respective relations to the development of the reflective reason. The application of this test must inevitably lead us, while honoring science and insisting upon its study, to place above it the study of history, of literature, of art, and of institutional life.

But these studies may not for a moment be carried on without the study of nature or in neglect of it. They are all humanities in the truest sense, and it is a false philosophy of education that would cut us off from any one of them, or that would deny the common ground on which they rest. In every field of knowledge what we are studying is some law or phase of energy, and the original as well as the highest energy is will. In the world of nature it is exhibited in one series of forms, those which produce the results known to us as chemical, physical, biological; in the history of mankind it is manifested in the forms of feelings, thoughts, deeds, institutions. Because the elements of self-consciousness and reflection are present in the latter series and absent in the former, it is to these and the knowledge of them that we must accord the first place in any table of educational values.

Two aspects of education

But education, as Mr. Froude has reminded us,[1] has two aspects. "On one side it is the cultivation of man's reason, the development of his spiritual nature. It elevates him above the pressure of material interests. It makes him superior to the pleasures and pains of a world which is but his temporary home, in

[1] *Short Studies on Great Subjects* (New York, 1872), II, 257.

filling his mind with higher subjects than the occupations of life would themselves provide him with." It is this aspect of education that I have been considering, for it is from this aspect that we derive our inspiration and our ideals. "But," continues Mr. Froude, "a life of speculation to the multitude would be a life of idleness and uselessness. They have to maintain themselves in industrious independence in a world in which it has been said there are but three possible modes of existence—begging, stealing, and working; and education means also the equipping a man with means to earn his own living." It is this latter and very practical aspect of education that causes us to feel at times the full force of the question of worth in education. Immediate utility makes demands upon the school which it is unable wholly to neglect. If the school is to be the training-ground for citizenship, its products must be usefully and soundly equipped as well as well disciplined and well informed. An educated proletariat—to use the forcible paradox of Bismarck—is a continual source of disturbance and danger to any nation. Acting upon this conviction, the great modern democracies—and the time seems to have come when a democracy may be defined as a

government, of any form, in which public opinion habitually rules—are everywhere having a care that in education provision be made for the practical, or immediately useful. This is as it should be, but it exposes the school to a new series of dangers against which it must guard.

The higher utilities

Utility is a term that may be given either a very broad or a very narrow meaning. There are utilities higher and utilities lower, and under no circumstances will the true teacher ever permit the former to be sacrificed to the latter. This would be done if, in its zeal for fitting the child for self-support, the school were to neglect to lay the foundation for that higher intellectual and spiritual life which constitutes humanity's full stature. This foundation is made ready only if proper emphasis be laid, from the kindergarten to the college, on those studies whose subject-matter is the direct product of intelligence and will, and which can, therefore, make direct appeal to man's higher nature. The sciences and their applications are capable of use, even from the standpoint of this higher order of utilities, because of the reason they exhibit and reveal. Man's rational freedom is the goal, and the sciences are the lower steps on the ladder that reaches to it.

Professor Tyndall on science

A splendid confirmation of this view of science is found in the notable Belfast address in which Professor Tyndall stormed the strongholds of prejudice one and twenty years ago. Said Professor Tyndall: [1]

> Science itself not unfrequently derives motive power from an ultra-scientific source. Some of its greatest discoveries have been made under the stimulus of a non-scientific ideal. This was the case amongst the ancients, and it has been so amongst ourselves. Mayer, Joule, and Colding, whose names are associated with the greatest of modern generalizations, were thus influenced. With his usual insight, Lange at one place remarks that "it is not always the objectively correct and intelligible that helps man most, or leads most quickly to the fullest and truest knowledge. As the sliding body upon the brachystochrone reaches its end sooner than by the straighter road of the inclined plane, so through the swing of the ideal we often arrive at the naked truth more rapidly than by the more direct processes of the understanding." Whewell speaks of enthusiasm of temper as a hindrance to science; but he means the enthusiasm of weak heads. There is a strong and resolute enthusiasm in which science finds an ally; and it is to the lowering of this fire, rather than to the diminution of intellectual insight, that the lessening productiveness of men of science in their mature years is to be ascribed. Mr. Buckle sought to detach intellectual achievement from moral force. He gravely erred; for without moral force to

[1] Presidential address, British Association for the Advancement of Science, Belfast, 1874.

whip it into action, the achievements of the intellect would be poor indeed.

It has been said that science divorces itself from literature; but the statement, like so many others, arises from lack of knowledge. A glance at the less technical writings of its leaders—of its Helmholtz, its Huxley, and its du Bois-Reymond—would show what breadth of literary culture they command. Where among modern writers can you find their superiors in clearness and vigor of literary style? Science desires not isolation, but freely combines with every effort toward the bettering of man's estate. Single-handed, and supported not by outward sympathy, but by inward force, it has built at least one great wing of the many-mansioned home which man in his totality demands. And if rough walls and protruding rafter-ends indicate that on one side the edifice is still incomplete, it is only by wise combination of the parts required with those already irrevocably built that we can hope for completeness. There is no necessary incongruity between what has been accomplished and what remains to be done. The moral glow of Socrates, which we all feel by ignition, has in it nothing incompatible with the physics of Anaxagoras which he so much scorned, but which he would hardly scorn to-day. . . .

The world embraces not only a Newton, but a Shakspere—not only a Boyle, but a Raphael—not only a Kant, but a Beethoven—not only a Darwin, but a Carlyle. Not in each of these, but in all, is human nature whole. They are not opposed, but supplementary—not mutually exclusive, but reconcilable. And if, unsatisfied with them all, the human mind, with the yearning of a pilgrim for his distant home, will still turn to the Mystery from which it has emerged, seeking so to fashion it as to give unity

to thought and faith, so long as this is done, not only without intolerance or bigotry of any kind, but with the enlightened recognition that ultimate fixity of conception is here unattainable, and that each succeeding age must be held free to fashion the mystery in accordance with its own needs—then, casting aside all the restrictions of Materialism, I would affirm this to be a field for the noblest exercise of what, in contrast with the knowing faculties, may be called the creative faculties of man.

Character and the moral order

Close as are man's structural relations to the lower animals, his equipment is peculiar to himself. The actions of the lower animals are conditioned by sensations and momentary impulses. Man, on the other hand, is enabled to raise himself above fleeting sensations to the realm of ideas, and in that realm he finds his real life. Similarly, man's will gradually frees itself from bondage to a chain of causes determined for it from without, and attains to a power of independent self-determination according to durable and continuing ends of action. This constitutes character, which, in Emerson's fine phrase, is the moral order seen through the medium of an individual nature. Freedom of the will is not, then, a metaphysical notion, nor is it obtained from nature or seen in nature. It is a development in the life of the human soul. Freedom and rationality are two names for the same thing, and their

highest development is the end of human life. This development is not, as Locke thought, a process arising without the mind and acting upon it, a passive and pliable recipient. Much less is it one that could be induced in the hypothetical statue of Condillac and Bonnet. It is the very life of the soul itself.

Education as spiritual growth

There is a striking passage in *The Marble Faun* in which Hawthorne suggests the idea that the task of the sculptor is not, by carving, to impress a figure upon the marble, but rather, by the touch of genius, to set free the glorious form that the cold grasp of the stone imprisons. With similar insight, Browning puts these words into the mouth of his Paracelsus:

> "Truth is within ourselves; it takes no rise
> From outward things, whate'er you may believe.
> There is an inmost centre in us all,
> Where truth abides in fulness; and around,
> Wall upon wall, the gross flesh hems it in,
> This perfect, clear perception. . . .
> . . . And, to know,
> Rather consists in opening out a way
> Whence the imprisoned splendor may escape,
> Than in effecting entry for a light
> Supposed to be without."

This is the poetical form of the truth that I believe is pointed to by both philosophy and

science. It offers us a sure standing-ground for our educational theory. It reveals to us, not as an hypothesis but as a fact, education as spiritual growth toward intellectual and moral perfection, and saves us from the peril of viewing it as an artificial process according to mechanical formulas. Finally, it assures us that while no knowledge is worthless—for it all leads us back to the common cause and ground of all—yet that knowledge is of most worth which stands in closest relation to the highest forms of the activity of that spirit which is created in the image of Him who holds nature and man alike in the hollow of his hand.

IV

IS THERE A NEW EDUCATION?

Presidential address before the Association of Colleges and Preparatory Schools of the Middle States and Maryland, at Easton, Pennsylvania, November 29, 1895

IS THERE A NEW EDUCATION?

The title of this discussion is designedly thrown into the form of a question. Its purpose is to provoke, if possible, a difference of opinion—always a healthier and more productive intellectual state than the dull mediocrity of agreement. Difference of opinion begets doubt, doubt begets inquiry, and inquiry eventually leads to truth. Virgil's fine line,

> Felix qui potuit rerum cognoscere causas,

is profoundly true; but more fortunate still is he who comes to his knowledge by the sure method of honest doubt.

Evolution and education

For a generation we have been doing lip-service to the doctrine of evolution; but only with great slowness and difficulty do old forms of speech and old habits of mind fit themselves to a new point of view that makes so strong an appeal both to our reason and to our imagination. In no department of knowledge is this more true than in the field of education. Education is essentially a conservative process; it cherishes its time-worn instruments and reveres

its time-honored standards. The treasures of the mind are too precious to be lightly exposed to the loss or harm that might come to them through change. Yet the opinion has found lodgment among our craft that after all, and despite the excellence of old methods and old standards, the educational theory and practise of a given age or generation must stand in close relation to its intellectual and ethical ideals, and to the material fabric of its civilization: and surely all three of these habitually vary, not only over long periods but in relatively short intervals of time. It is a grave matter for the teacher if virtue is identical with knowledge, as Socrates taught; or if it is the result of habit, as Aristotle held; or if it is the cunning invention of rulers, as Mandeville suggested; or if it is mere skill in calculating the chances of pleasure and pain, as Bentham laid down. It is important, too, primarily for the higher education, but eventually for the lower schools as well, if our intellectual ideal is represented by the active mind of a Leibniz or a Gladstone, with its immense energy and broad range of interests; or if it is better typified by the narrow, plodding specialization of a Darwin or of those Teutonic philologers who are unduly distracted if their investigations cover

more than the gerund or the dative case. Still more directly must our education depend upon the material equipment of the time. In this day of innumerable printing-presses, with a power of production sadly out of proportion to their power of discrimination, it is quite inconceivable that we should not find ourselves forced to con anew the grounds on which rest the principles and methods that have come down to us from the age of manuscripts and pack-saddles. Such a process of questioning has been under way for some time past, and has contributed in no small degree to that marvellous enthusiasm for education and to that belief in it, the evidences of which are to be seen on every hand.

Study of education as a science

There are three avenues of scientific approach to the study of education, and in each of them the evolutionary point of view is not only illuminating but controlling. These three avenues are the physiological, the psychological, and the sociological. Their points of contact are many and their interrelations are close. Modern psychology has already given up the attempt to treat mental life without reference to its physical basis; and it will sooner or later regard any interpretation as incomplete that does not relate the individual to

what may be called the social life or consciousness. Man's institutional life is as much a part of his real self as his physical existence or his mental constitution. *Robinson Crusoe* is, in one of the catch phrases of the day, a barren ideality.

It must be admitted that this point of view is both very old and very new. It is very old, for it was Aristotle himself who wrote: "Man is by nature a political animal. And he who by nature, and not by mere accident, is without a state, is either above humanity or below it."[1] It is also very new, for it is in flat contradiction to the doctrine of Rousseau: "Compelled to oppose nature or our social institutions, we must choose between making a man and a citizen, for we cannot make both at once"[2]—the crudeness and superficiality of which have not prevented it from exercising a wide and long-continued influence. Modern philosophy confirms here, as so often, the analysis of Aristotle; and it rejects, as is becoming customary, the extreme individualism of the later eighteenth century. The significance of this for our educational theory is all-important.

[1] *The Politics of Aristotle* (Oxford, 1885), I, 2, Jowett's translation, p. 4.

[2] Rousseau's *Émile* (New York, 1893), translated by W. H. Payne, p. 5.

The physiological aspect

Returning now to the first of the three pillars on which the modern study of education rests—the physiological—it may be useful to recall briefly what consideration has been given to it in the past. All of the older culture-nations laid stress upon it, and some of them dealt with it in systematic fashion. But the Greeks alone understood the educational value of play. Their great national games combined systematic physical training and play in a way that we have not yet succeeded in equalling. The ascetic ideal that ruled the schools of the Middle Ages left no place for a continuance of the Greek practise, and it was forgotten. We find ourselves to-day struggling to imitate it. In Germany systematic physical training is made much of in education, but genuine play is not prominent. In England, on the contrary, play has been found so successful in developing strength and suppleness of body and sturdy, independent character that anything approaching systematic, formal training is regarded as almost unnecessary. In this country the present tendency is to develop both elements, after the fashion of the Greeks; and it is to be hoped that the outcome will be even more satisfactory than it was at Athens and at Corinth.

But physical and physiological considerations cut far deeper than this. They demand a hearing when we have under discussion questions of school hours and recesses, of programmes and tasks, of school furniture, of text-books and blackboards, of light, heat, and fresh air. On all of these topics we have recently learned much that has not yet found its way into our practise. College faculties and school-teachers, framers of examination tests, donors of laboratories and dormitories, and, most of all, architects are as a rule oblivious to the vital interest that the pupil has in matters of this kind. Considerations of tradition, convenience, cost, and external appearance are allowed full swing, and the growing youth must fit the Procrustean bed as best they can. The signs of malnutrition and weakness, as described, for example, by Warner, and the laws of mental and physical fatigue, as arrived at by such investigations as those of Mosso and of Burgerstein, are about as familiar to teachers in college and in preparatory schools as are the Laws of Manu. And yet they affect vitally every young man or young woman who enters a schoolroom or a college. No amount of thundering eloquence on the value of the ancient classics, no emphasis on character as the sole

end of education can make amends for our failure to study the facts dealing with the physical and physiological elements in education, and for our delay in applying them. We need to be strongly reminded that wickedness is closely akin to weakness, and then to consider the moral consequences of our physiological ignorance.[1]

The psychological aspect

The relation of psychology to education is the one subject on which the teacher of to-day is supposed to be informed. Normal schools without number, and here and there a college, give definite instruction in the subject. Yet a careful inspection of the most popular textbooks in use, and visits to some hundreds of classrooms, have convinced me that the results of this knowledge, if it exists, are, in the field of secondary and higher education, almost *nil.* In this respect the elementary teacher is far in advance. Perhaps no secondary school or college in America can show teaching to compare in mastery of scientific method, and in technical skill, with the best teaching to be seen in many of the public elementary schools, particularly in the Western States. In consequence of this, we may safely assume that

[1] Compare "Moral Education and Will-Training," by G. Stanley Hall, in *Pedagogical Seminary*, II, 72–89.

pupils fresh from the vigorous intellectual and moral growth of a well-conducted elementary school will turn aside from the machine methods and dull, uninspiring class-exercises of our average academy with disgust. The new educational life-blood is flowing most freely and vigorously in the veins of the elementary teacher. Here and there a secondary schoolmaster, and here and there a college president or professor, takes a genuine and intelligent interest in education for its own sake; but the vast majority know nothing of it, and are but little affected by it. They are content to accumulate what they are pleased to term "experience"; but their relation to education is just that of the motorman on a trolley-car to the science of electricity. They use it; but of its nature, principles, and processes they are profoundly ignorant. The one qualification most to be feared in a teacher, and the one to be most carefully inquired into, is this same "experience" when it stands alone. I am profoundly distrustful of it. The pure empiricist never can have any genuine experience, any more than an animal, because he is unable to interrogate the phenomena that present themselves to him, and hence is unable to understand them. The scientific teacher, the the-

Limitations of experience in teaching

orist, on the contrary, asks what manner of phenomena these are that are before him, what are their inner relations, and the principles on which they are based. This, of course, is the first great step, taken by all scientific method, toward a knowledge of causes. It is at this point that we reach the real reason for the need of an accurate knowledge of psychology on the part of the teacher. His dealings in the schoolroom are primarily with mental processes and mental growth. Unless these are scientifically studied and understood, or—and this does not happen often—unless natural psychological insight comes to the rescue of psychological ignorance, the teaching is bound to be mechanical; and the longer it is continued, the more "experience" is acquired, and the more wooden and mechanical it becomes.

A short time ago I was present at an exercise in modern history, given to an undergraduate class averaging over eighteen years of age, in one of our Eastern colleges. The textbook in the hands of the students was of a very elementary character, and is much used in public high schools, both East and West. The teacher was a college graduate, and had held his position for several years. These

years had been years of "experience," and would have been strongly urged as an important qualification had his name been under consideration for promotion or for transfer to another institution. Yet the entire hour that I spent in his class was given up to the dictation of an abstract of the text-book. This, he told me, was his usual method. The students took down the dictation, word for word, in a dull, listless way, and gave a sigh of mingled despair and relief when it came to an end. This process went on several times weekly for either one or two years. I ascertained from the instructor that he called it "hammering the facts home." He is, for aught I know, "hammering" yet, and now has some additional "experience" to his credit. So have his pupils.

No amount of psychological learning could make it impossible for the inquirer to find cases like this, and the hundreds of others of which they are typical, in the schools and colleges; but a psychological training on the part of the teacher would go far to diminish their number. Professor Royce pointed out[1] several years ago that what the teacher has chiefly to gain from the study of psychology is not

[1] "Is There a Science of Education?" in *Educational Review*, (New York, 1891), I, 15–25; 121–132.

rules of procedure, but the psychological spirit. The teacher, he adds, should be a naturalist and cultivate the habit of observing the mental life of his pupils for its own sake. In this he will follow the method common to all naturalists: "What is here in this live thing? Why does it move thus? What is it doing? What feelings does it appear to have? What type of rudimentary intelligence is it showing?" Such questions as these form the habit of watching minds, and of watching them closely. This habit is the surest road to good teaching, and its formation is the best service that psychology can render to the classroom. Until a teacher has acquired that habit and subordinated his schoolroom procedure to it, he is not teaching at all; at best he is either lecturing or hearing recitations.

The doctrines of Herbart: Apperception and interest

We are chiefly indebted to the students and followers of Herbart for the present widespread interest in this country in two psychological doctrines of the greatest importance for all teaching—the doctrine of apperception and the doctrine of interest. The former has to do with mental assimilation, the latter with the building of character and ideals. I know of no more fruitful field for the application of both of these than the freshman year of the

college course. My observation has taught me that the work of the freshman class in college is, as a rule, very ineffective. College teachers who admit this fact are in the habit of accounting for it by alleging the difficulty of welding into a homogeneous mass the new students of different advantages, training, and mental habits. The task is more than difficult; it is impossible, and ought never to be attempted, much less encouraged. That it goes on year after year in a hundred colleges is due to the strait-jacket system of class teaching, by which we defy the rules of God and man to the glory of what, in our professional cant, we call "sound education." If we could secure a hearing for the doctrine of apperception, all this would be changed. We should then recognize in our practise as we do in our faith that the mind is not a passive recipient of the impressions that reach it; that it reacts upon them, colors them, and makes them a part of itself in accordance with the tendency, the point of view, and the possessions that it already has. This tendency, this point of view, and these possessions differ in the case of every individual. Instead of overlooking or seeking to annul these differences, we should first understand them and then

base our teaching upon them. If the first month of freshman year were spent in carefully ascertaining the stage of development, in power and acquirement, that each pupil had reached, it would be possible so to order and adjust the work of the year as to make it useful and educative. I have known case after case in which the opposite policy of treating all upon one plane, and making the same demands upon all, has made a college course a source of positive harm; it also accounts, in greater measure than we are aware of, for the large proportion of students who fall away at the end of the freshman and sophomore years. Yet so long as college teachers know so little psychology as to cling to the old dogma of formal discipline—which adds to real value some very distinct limitations—and continue to pound away on so much mathematics to train the reasoning powers and so much Greek grammar to train something else, regardless of the content of the instruction and of all other considerations—just so long will one mind be lost or injured for every one that is saved or benefited. As Colonel Parker has so forcibly said: "We dwell on those who have been saved by our older methods, but who has counted the lost?"

The situation is not very different with respect to the doctrine of interest. We continually complain that valuable and necessary instruction given in school and in college is forgotten, that it is not retained, not extended, and not applied. The fault lies partly, no doubt, with the pupils, but largely with ourselves. We have still to learn what interest means, how it is changed from indirect to direct, and how it is built up into a permanent element of character. We are inexperienced in seeking out and seizing upon the present and temporary interests of the student, and in using them as a factor in training. It is a common thing to hear it said that since life is full of obstacles and character is strengthened by overcoming them, so the school and college course should not hesitate to compel students to do distasteful and difficult things simply because they are distasteful and difficult. I do not hesitate to say that I believe that doctrine to be profoundly immoral and its consequences calamitous. But, it is answered, you certainly would not trust to a student's whims and allow him to do or not do as he pleases. Certainly not; and that is not the alternative. The proper and scientific course is to search for the pupil's empirical and natural interests,

and to build upon them. This is not always easy; it requires knowledge, patience, and skill. It is far easier to treat the entire class alike and to drive them over the hurdles set by a single required course of study, in the vain hope that the weak and timid will not be injured as much as the strong and confident will be benefited, and that somehow or other the algebraic sum of the results of the process will bear a positive sign. I earnestly commend to every teacher the study of these two principles, apperception and interest. I do so in the firm belief that the practical result of that study would be an immense uplifting of the teaching efficiency of every educational institution in the United States.

The sociological aspect

What, for lack of a better term, I call the sociological aspect of education is, in many respects, the most important of all. Under this head are to be put such questions as those that deal with the aim and limits of education, its relation to the state, its organization and administration, and the course of study to be pursued. I can now refer to but a single one of these topics. Doctor Harris, in the opening paragraphs of his well-known report on the correlation of studies, dealt a final blow to the idea that the course of study is to be settled

either by tradition or by conditions wholly psychological. "The game of chess," he points out,[1] "would furnish a good course of study for the discipline of the powers of attention and calculation of abstract combinations, but it would give its possessor little or no knowledge of man or nature. . . . Psychology of both kinds, physiological and introspective, can hold only a subordinate place in the settlement of questions relating to the correlation of studies." He also shows that the chief consideration to which all others are to be subordinated is the "requirement of the civilization into which the child is born, as determining not only what he shall study in school, but what habits and customs he shall be taught in the family before the school age arrives; as well as that he shall acquire a skilled acquaintance with some one of a definite series of trades, professions, or vocations in the years that follow school; and, furthermore, that this question of the relation of the pupil to his civilization determines what political duties he shall assume and what religious faith or spiritual aspirations shall be adopted for the conduct of his life."[2]

[1] *Report of the Committee of Fifteen on Elementary Education* (New York, 1895), p. 42.

[2] *Ibid.*, p. 41.

It is at this point that the study of education from the sociological point of view begins. Instead of forcing the course of study to suit the necessities of some preconceived system of educational organization, it should determine and control that organization absolutely. Were this done, the troubles of the secondary school, the Cinderella of our educational system, would disappear. Just at present it is jammed into the space left between the elementary school and the college, without any rational and ordered relation to either.

Barrier between secondary school and college

The ever-present problem of college entrance is purely artificial, and has no business to exist at all. We have ingeniously created it, and are much less ingeniously trying to solve it. Leibniz might have said that mental development, as well as nature, never makes leaps. It is constant and continuous. The idea that there is a great gulf fixed between the sixteenth and seventeenth years, or between the seventeenth and eighteenth, which only a supreme effort can bridge, is a mere superstition that not even age can make respectable. It ought to be as easy and as natural for the student to pass from the secondary school to the college as it is for him to pass from one class to another in the school or in the college. In like

fashion, the work and methods of the one ought to lead easily and gradually to those of the other. That they do not do so in the educational systems of France and Germany is one of the main defects of those systems. The American college as a school of broad and liberal education, a place where studies are carried on with reference to their general and more far-reaching relations, is indispensable for the very reason that it permits and encourages the expansion and development of school work in the widest possible way, before the narrow specialization of the university is entered upon. Happily, there are in the United States no artificial obstacles interposed between the college and the university. We make it very easy to pass from the one to the other; the custom is to accept any college degree for just what it means. We make it equally easy to pass from one grade or class to another, and from elementary school to secondary school, the presumption always being that the pupils are ready and competent to go forward. The barrier between secondary school and college is the only one that we insist upon retaining.

It is not necessary to dispense with the highly valuable college-admission examination if that examination can be properly organized

and conducted. To do this will require, first, a general agreement upon the definitions of the various subjects a knowledge of which must or may be offered for admission to college, and an arrangement by which secondary-school teachers and college teachers shall co-operate both in framing such definitions, in formulating the scope and details of the examinations, and in rating the performances of the candidates. Under these circumstances, the college-admission examination might be made a very important educational instrument, of value not alone to the college, but to the secondary school as well. This principle of co-operation between secondary school and college in formulating conditions of college admission and in administering the college-admission examination does not involve any restriction upon the number or variety of secondary-school subjects that may be accepted in partial fulfilment of the requirements for admission to any particular college.[1]

The broadening of the course of study

Public opinion itself, despite the protests of the pundits of the faculties, is forcing an extension of the course of study. It is one of the best bits of grim humor that our American

[1] This important reform has now been admirably accomplished by the College Entrance Examination Board, whose offices are in New York.

practise, inherited from the mother country, affords, that the designation "liberal" has come to be claimed as the sole prerogative of a very narrow and technical course of study that was invented for a very narrow and technical purpose, and that has been very imperfectly liberalized in the intervening centuries. It ought to soften somewhat the asperity of teachers of Greek to remember that the very arguments by which they are in the habit of resisting the inroads of the modern languages, the natural sciences, and economics, were used not so many hundreds of years ago to keep Greek itself from edging its way into the curriculum at all. Paulsen is indubitably right in his insistence upon the fact that the modern world has developed a culture of its own, which, while an outgrowth of the culture of antiquity, is quite distinct from it. It is to this modern culture that our education must lead. The first question to be asked of any course of study is: Does it lead to a knowledge of our contemporary civilization? If not, it is neither efficient nor liberal.

In society as it exists to-day the dominant note, running through all of our struggles and problems, is economic—what the old Greeks might have called political. Yet it is a con-

stant fight to get any proper teaching from the economic and social point of view put before high-school and college students. They are considered too young or too immature to study such recondite subjects, although the nice distinctions between the Greek moods and tenses and the principles of conic sections, with their appeal to the highly trained mathematical imagination, are their daily food. As a result, thousands of young men and young women, who have neither the time, the money, nor the desire for a university career, are sent forth from the schools either in profound ignorance of the economic basis of modern society, or with only the most superficial and misleading knowledge of it. The indefensibleness of this policy, even from the most practical point of view, is apparent when we bear in mind that in this country we are in the habit of submitting questions, primarily economic in character, every two or four years to the judgment and votes of what is substantially an untutored mob. If practical politics only dealt with chemistry as well as with economics, we could, by the same short and easy method, come to some definite and authoritative conclusion concerning the atomic theory and learn the real facts regarding helium. But since the eco-

nomic facts, and not the chemical or linguistic facts, are the ones to be bound up most closely with our public and private life, they should, on that very account, be strongly represented in every curriculum. We can leave questions as to the undulatory theory of light and as to Grimm's and Verner's laws to the specialists; but we may not do the same thing with questions as to production and exchange, as to monetary policy and taxation. The course of study is not liberal, in this century, that does not recognize these facts and emphasize economics as it deserves. I cite but this one instance of conflict between the inherited and the scientifically constructed course of study. The argument and its illustration might be much extended.

Attitude of teachers toward the scientific study of education

I have now indicated how I should answer my own question, and have briefly pointed out typical grounds on which that answer rests. There remains the ungracious duty of adding a word regarding the attitude of college faculties and schoolmasters toward the scientific study of education. The recklessness with which the man of letters, sometimes the college president, and now and then even the more canny college professor, will rush into the public discussion of matters of education

concerning which he has no knowledge whatever, and to which he has never given a half-hour's connected thought, is appalling. Opinion serves for information, and prejudice usurps the place of principle. The popular journals and the printed proceedings of educational associations teem with perfectly preposterous contributions bearing the signatures of worthy and distinguished men, who would not dream of writing dogmatically upon a physical, a biological, or a linguistic problem. For some recondite reason they face the equally difficult and unfamiliar problems of education without a tremor. The effect is bad enough on the colleges and schools themselves, but it is far worse on the public generally, who are thus led off to the worship of false gods. Even in the largest American institutions, where most is at stake, the men who give any conscientious and prolonged study to education itself, as distinct from the department of knowledge in which their direct work lies, can be counted upon the fingers of one hand. As a consequence, many college faculties are no better qualified to decree courses of study and conditions of admission than they are to adopt a system of ventilation or of electric lighting. In time, doubtless, this will be recognized, and

in the former case, as in the latter, the faculties will submit to be guided by specialists who do know. That will never come to pass, however, until school and college teachers see clearly that scholarship is one thing and knowledge of the educational process quite another; that long service in a school or college is almost as compatible with ignorance of education, scientifically considered, as long residence in a dwelling is compatible with ignorance of architecture and carpentry.

Doctor Johnson's acumen was equal to drawing a distinction between the new as the hitherto non-existent, the new as the comparatively recent, and the new as the hitherto unfamiliar. In each and all of these senses of the word, I am confident that there is a new education.

V

FIVE EVIDENCES OF AN EDUCATION

An address before the Phi Beta Kappa Society of Vassar College, June 10, 1901

FIVE EVIDENCES OF AN EDUCATION

"If you had had children, sir," said Boswell, "would you have taught them anything?" "I hope," replied Doctor Johnson, "that I should have willingly lived on bread and water to obtain instruction for them; but I would not have set their future friendship to hazard, for the sake of thrusting into their heads knowledge of things for which they might not perhaps have either taste or necessity. You teach your daughters the diameters of the planets, and wonder when you have done that they do not delight in your company." From which it appears that Doctor Johnson, by a sort of prolepsis, was moved to contribute to the discussion of one of the vexed questions of our time. Who is the educated man? By what signs shall we know him?

Who is the educated man?

"In the first golden age of the world," Erasmus observes, in his *Praise of Folly*, "there was no need of these perplexities. There was then no other sort of learning but what was naturally collected from every man's common sense, improved by an easy experience. What

use could there have been of grammar, when all men spoke the same mother tongue, and aimed at no higher pitch of oratory than barely to be understood by each other? What need of logic, when they were too wise to enter into any dispute? Or what occasion for rhetoric, where no difference arose to require any laborious decision?" Surely, in contrasting this picture of a far-off golden age with our present-day strenuous age of steel, we must be moved to say, with the preacher: "In much wisdom is much grief; and he that increaseth knowledge increaseth sorrow."

The quantitative Ideal

It is only two hundred and fifty years ago that Comenius urged, with ardent zeal, the establishment in London of a college of learned men who should bring together in one book the sum total of human wisdom, so expressed as to meet the needs of both the present and all future generations. This scheme for a Pansophia, or repository of all learning, proved very attractive in the seventeenth century, for it easily adjusted itself to the notions of a period which looked upon learning as a substantial and measurable quantity, to be acquired and possessed. Unfortunately, this quantitative ideal of education, with its resultant processes and standards, is still widely

influential, and it tempts us to seek the evidences of an education in the number of languages learned, in the variety of sciences studied, and generally in the quantity of facts held in the memory reserve. But, on the other hand, any serious attempt to apply quantitative standards to the determination of education quickly betrays their inadequacy and their false assumptions. If to be educated means to know nature in systematic fashion and to be able to interpret it, then nearly every man of letters, ancient or modern, must be classed with the uneducated. Or if to be educated means to have sympathetic, almost affectionate, insight into the great masterpieces of art and of literature, then innumerable great men of action, who have fully represented the ideals and the power of their time and who manifested most admirable qualities of mind and of character, were uneducated. The case is even worse to-day. A host of knowledges compass us about on every side and bewilder by their variety and their interest. We must exclude the many to choose the one. The penalty of choice is deprivation; the price of not choosing is shallowness and incapacity. The quantitative method of estimating education breaks down, then, of its own weight. A

true standard is to be sought in some other direction.

The fivefold spiritual inheritance

A full analysis of the facts of life as they confront us to-day would show, I feel confident, that all knowledges and all influences are not on a single plane of indifference toward the human mind that would be educated. All parts of the spiritual machine are not mutually interchangeable. There are needs to be met and longings to be satisfied that will not accept any vicarious response to their demands. The scientific, the literary, the æsthetic, the institutional, and the religious aspects of life and of civilization, while interdependent, are yet independent of each other, in the sense that no one of them can be reduced to a function of another, or can be stated in terms of another.[1] Therefore, each of these five aspects must, I think, be represented in some degree in every scheme of training which has education for its end. Nevertheless, this training when it arrives at education will not suffer itself to be measured and estimated quantitatively in terms either of science, of letters, of art, of institutions, or of religion. It will have produced certain traits of intellect and of character which find expression in ways open to

[1] See pp. 26–38.

the observation of all men, and it is toward these traits or habits, not toward external and substantial acquisition or accomplishment, that one must turn to find the true and sure evidences of an education, as education is conceived to-day.

Correctness and precision in the use of the mother tongue

First among the evidences of an education I name correctness and precision in the use of the mother tongue. Important as this power is, and is admitted to be, it is a comparatively new thing in education. The modern European languages took on educational significance only when the decentralization of culture began at the close of the Middle Ages. So late as 1549 Jacques du Bellay supported the study of French with the very mild assertion that it is "not so poor a tongue as many think it." Mulcaster, writing a little later, found it necessary to tell why his book on education was put in English rather than in Latin, and to defend the vernacular when he referred to its educational usefulness. Melanchthon put German in a class with Greek and Hebrew, and contrasted all three unfavorably with Latin. Indeed it was not until the present German Emperor plainly told the Berlin School Conference of 1890 that a national basis was lacking in German education; that the foundation

of the gymnasium course of study must be German; that the duty of the schoolmaster was to train the young to become Germans, not Greeks and Romans; and that the German language must be made the centre around which all other subjects revolved, that a revision of the official school programme was brought about that made place for the really serious study of the German language and literature. And to-day, where the influence of the English universities and of not a few American colleges is potent, the study of English is slight and insignificant indeed. The superstition that the best gate to English is through the Latin is anything but dead.

But for the great mass of the people the vernacular is not only the established medium of instruction, but fortunately also an important subject of study. A chief measure of educational accomplishment is the ease, the correctness, and the precision with which one uses this instrument.

It is no disrespect to the splendid literatures which are embodied in the French and the German tongues, and no lack of appreciation of the services of those great peoples to civilization and to culture, to point out that of modern languages the English is easily the

first and the most powerful, for "it is the greatest instrument of communication that is now in use among men upon the earth." It is the speech of an active people among whom individual liberty and personal initiative are highly prized. It falls short, no doubt, of the philosophical pliability of the Greek and of the scientific ductility of the German; but what is there in the whole field of human passion and human action that it cannot express with freedom and with a power all its own? Turn *Othello* into German, or compare the verse of Shelley or of Keats with the graceful lines of some of their French contemporaries, and learn the peculiar power of the English speech. In simple word or sonorous phrase it is unequalled as a medium to reveal the thoughts, the feelings, and the ideals of humanity.

One's hold upon the English tongue is measured by his choice of words and by his use of idiom. The composite character of modern English offers a wide field for apt and happy choice of expression. The educated man, at home with his mother tongue, moves easily about in its Saxon, Romanic, and Latin elements, and has gained by long experience and wide reading a knowledge of the mental in-

cidence of words as well as of their artistic effect. He is hampered by no set formulas, but manifests in his speech, spoken and written, the characteristic powers and appreciation of his nature. The educated man is of necessity, therefore, a constant reader of the best written English. He reads not for conscious imitation, but for unconscious absorption and reflection. He knows the wide distinction between correct English on the one hand, and pedantic, or, as it is sometimes called, "elegant," English on the other. He is more likely to "go to bed" than to "retire," to "get up" than to "arise," to have "legs" rather than "limbs," to "dress" than to "clothe himself," and to "make a speech" rather than to "deliver an oration." He knows that "if you hear poor English and read poor English, you will pretty surely speak poor English and write poor English,"[1] and governs himself accordingly. He realizes the power and place of idiom and its relation to grammar, and shows his skill by preserving a balance between the two in his style. He would follow with intelligent sympathy the scholarly discussions of idiom and of grammar by Professor Earle[2] and would find therein the justi-

[1] White, *Everyday English* (Boston, 1880), p. 503.
[2] In his *English Prose* (London, 1890), c. 2, 7.

fication of much of his best practise. In short, in his use of his mother tongue he would give sure evidence of an education.

Refined and gentle manners

As a second evidence of an education I name those refined and gentle manners which are the expression of fixed habits of thought and of action. "Manners are behavior and good breeding," as Addison said, but they are more. It is not without significance that the Latin language has but a single word (*mores*) both for usages, habits, manners, and for morals. Real manners, the manners of a truly educated man or woman, are an outward expression of intellectual and moral conviction. Sham manners are a veneer which falls away at the dampening touch of the first selfish suggestion. Manners have a moral significance, and find their basis in that true and deepest self-respect which is built upon respect for others. An infallible test of character is to be found in one's manners toward those whom, for one reason or another, the world may deem his inferiors. A man's manners toward his equals or his superiors are shaped by too many motives to render their interpretation either easy or certain. Manners do not make the man, but manners reveal the man. It is by the amount of respect, deference, and cour-

tesy shown to human personality as such that we judge whether one is on dress parade or whether he is so well-trained, well-educated, and so habitually ethical in thought and action that he realizes his proper relation to his fellows, and reveals his realization in his manners. As Kant insisted more than a century ago, a man exists as an end in himself, and not merely as a means to be arbitrarily used by this or that will; and in all his actions, whether they concern himself alone or other rational beings, he must always be regarded as an end. True manners are based upon a recognition of this fact, and that is a poor education indeed which fails to inculcate the ethical principle and the manners that embody it.

The habit of reflection

As a third evidence of an education I name the power and habit of reflection. It is a frequent charge against us moderns, particularly against Americans, that we are losing the habit of reflection, and the high qualities which depend upon it. We are told that this loss is a necessary result of our hurried and busy lives, of our diverse interests, and of the annihilation of space and time by steam and electricity. The whole world and its happenings are brought to our very doors by the daily newspaper. Our attention leaps from Manila to Pekin,

from Pekin to the Transvaal, and from the Transvaal to Havana. We are torn by conflicting or unconnected emotions, and our minds are occupied by ideas following each other with such rapidity that we fail to get a firm and deep hold of any one of the great facts that come into our lives. This is the charge which even sympathetic critics bring against us.

If it be true—and there are some counts in the indictment which it is difficult to deny—then one of the most precious evidences of an education is slipping from us, and we must redouble our efforts to keep fast hold upon it. For an unexamined life, as Socrates unceasingly insisted, is not worth living. The life which asks no questions of itself, which traces events back to no causes and forward to no purposes, which raises no vital issues of principle, and which seeks no interpretation of what passes within and without, is not a human life at all; it is the life of an animal. The trained and the untrained mind are perhaps in sharpest contrast at this very point. An armory of insights and convictions always ready for applications to new conditions, and invincible save by deeper insights and more rational convictions, is a mark of a trained and educated mind. The educated man has

standards of truth, of human experience, and of wisdom by which new proposals are judged. These standards can be gained only through reflection. The undisciplined mind is a prey to every passing fancy and the victim of every plausible doctrinaire. He has no permanent forms of judgment which give him character.

Renan was right when he held that the first condition for the development of the mind is that it shall have liberty; and liberty for the mind means freedom from the control of the unreasonable, and freedom to choose the reasonable in accordance with principle. A body of principles is a necessary possession of the educated man. His development is always with reference to his principles, and proceeds by evolution, not revolution.

Philosophy is, of course, the great single study by which the power of reflection is developed until it becomes a habit, but there is a philosophic study of literature, of politics, of natural science, which makes for the same end. The question how, whose answer is science, and the question why, whose answer is philosophy, are the beginnings of reflection. A truly educated man asks both questions continually, and as a result is habituated to reflection.

The power to grow

As a fourth evidence of an education I name the power of growth. There is a type of mind which, when trained to a certain point, crystallizes, as it were, and refuses to move forward thereafter. This type of mind fails to give one of the essential evidences of an education. It has perhaps acquired much and promised much; but somehow or other the promise is not fulfilled. It is not dead, but in a trance. Only such functions are performed as serve to keep it where it is; there is no movement, no development, no new power or accomplishment. The impulse to continuous study, and to that self-education which are the conditions of permanent intellectual growth, is wanting. Education has so far failed of one of its chief purposes.

A human mind continuing to grow and to develop throughout a long life is a splendid and impressive sight. It was that characteristic in Mr. Gladstone which made his personality so attractive to young and ambitious men. They were fired by his zeal and inspired by his limitless intellectual energy. To have passed from being "the rising hope of the stern and unbending Tories" in 1838 to the unchallenged leadership of the anti-Tory party in Great Britain a generation later, and to have

continued to grow throughout an exceptionally long life is no mean distinction; and it is an example of what, in less conspicuous ways, is the lot of every mind whose training is effective. Broadened views, widened sympathies, deepened insights are the accompaniments of growth.

For this growth a many-sided interest is necessary, and this is why growth and intellectual and moral narrowness are eternally at war. There is much in our modern education which is uneducational because it makes growth difficult, if not impossible. Early specialization, with its attendant limited range both of information and of interest, is an enemy of growth. Turning from the distasteful before it is understood is an enemy of growth. Failure to see the relation of the subject of one's special interest to other subjects is an enemy of growth. The pretense of investigation and discovery before mastering existent knowledge is an enemy of growth. The habit of cynical indifference toward men and things and of aloofness from them, sometimes supposed to be peculiarly academic, is an enemy of growth. These, then, are all to be shunned while formal education is going on, if it is to carry with it the priceless gift of an impulse to continuous

growth. "Life," says Bishop Spalding in an eloquent passage,[1] "is the unfolding of a mysterious power, which in man rises to self-consciousness, and through self-consciousness to the knowledge of a world of truth and order and love, where action may no longer be left wholly to the sway of matter or to the impulse of instinct, but may and should be controlled by reason and conscience. To further this process by deliberate and intelligent effort is to educate"—and, I add, to educate so as to sow the seed of continuous growth, intellectual and moral.

The power to do

And as a fifth evidence of an education I name efficiency—the power to do. The time has long since gone by, if it ever was, when contemplation pure and simple, withdrawal from the world and its activities, or intelligent incompetence was a defensible ideal of education. To-day the truly educated man must be, in some sense, efficient. With brain, tongue, or hand he must be able to express his knowledge, and so leave the world other than he found it. Mr. James is simply summing up what physiology and psychology both teach when he exclaims: "No reception without reaction, no impression without correlative ex-

[1] *Means and Ends of Education* (Chicago, 1895), p. 72.

pression—this is the great maxim which the teacher ought never to forget. An impression which simply flows in at the pupil's eyes or ears, and in no way modifies his active life, is an impression gone to waste. It is physiologically incomplete. It leaves no fruits behind it in the way of capacity acquired. Even as mere impression, it fails to produce its proper effect upon the memory; for, to remain fully among the acquisitions of the latter faculty, it must be wrought into the whole cycle of our operations. Its motor consequences are what clinch it."[1] This is just as true of knowledge in general as of impressions. Indefinite absorption without production is fatal both to character and to the highest intellectual power. Do something and be able to do it well; express what you know in some helpful and substantial form; produce, and do not everlastingly feel only and revel in feelings—these are counsels which make for a real education and against that sham form of it which is easily recognized as well-informed incapacity. Our colleges and universities abound in false notions, notions as unscientific as they are unphilosophical, of the supposed value of knowledge, information, for its own sake. It

[1] *Talks to Teachers on Psychology* (New York, 1899), p. 33.

has none. The date of the discovery of America is in itself as meaningless as the date of the birth of the youngest blade of grass in the neighboring field; it means something because it is part of a larger knowledge-whole, because it has relations, applications, uses; and for the student who sees none of these and knows none of them, America was discovered in 1249 quite as much as it was in 1492.

High efficiency is primarily an intellectual affair, and only *longo intervallo* does it take on anything approaching a mechanical form. Its mechanical form is always wholly subordinate to its springs in the intellect. It is the outgrowth of an established and habitual relationship between intellect and will, by means of which knowledge is constantly made power. For knowledge is not power, Bacon to the contrary notwithstanding, unless it is made so, and it can be made so only by him who possesses the knowledge. The habit of making knowledge power is efficiency. Without it education is incomplete.

Five characteristics of the educated man

These five characteristics, then, I offer as evidences of an education—correctness and precision in the use of the mother tongue; refined and gentle manners, which are the expression

of fixed habits of thought and action; the power and habit of reflection; the power of growth; and efficiency, or the power to do. On this plane the physicist may meet with the philologian, and the naturalist with the philosopher, and each recognize the fact that his fellow is an educated man, though the range of their information is widely different, and the centres of their highest interests are far apart. They are knit together in a brotherhood by the close tie of those traits which have sprung out of the reaction of their minds and wills upon that which has fed them and brought them strength. Without these traits men are not truly educated and their erudition, however vast, is of no avail; it furnishes a museum, not a developed human being.

It is these habits, of necessity made by ourselves alone, begun in the days of school and college, and strengthened with maturer years and broader experience, that serve to show to ourselves and to others that we have discovered the secret of gaining an education.

VI

TRAINING FOR VOCATION AND FOR AVOCATION

Based upon an article written for the *New York Times*,
September 19, 1908

TRAINING FOR VOCATION AND FOR AVOCATION

The swing of the educational pendulum has now brought training for vocations—that is, for industries, callings, or professions—to the forefront of present-day interest and discussion. The familiar opposition between vocation and culture is heavily emphasized and falsely interpreted. Paradoxes without number are paraded as axioms. Liberal learning, itself a sure claim to immortality for any nation that cultivates it, is made light of; and in the heat of debate the higher usefulness is held to be subordinate to the lower.

The precise relation between training for vocation and liberal learning merits examination, however brief.

Labor and leisure

It needs no profound philosophy to tell us that if any one is to live, some one must work. Human life is an economic, as well as a physiologic, fact. Moreover, the history of the human race makes it plain that progress in civilization is measured by the use that man makes of his higher, or reflective and creative,

powers. It is what he does in literature, in art, in government, in science and its applications that carries man forward in his own esteem. One concludes, therefore, that the purpose of a vocation is to gain time for avocation; that the aim of labor is leisure. The things that our labor produces would not interest us indefinitely, or perhaps greatly, if they were not exchangeable for leisure or if they did not contribute to the enjoyment of leisure.

In a hard-and-fast social and political system, men are more or less permanently divided into groups or castes, living and moving in different and separate planes. One grandfather, father, and son work at the same occupation, perhaps in one and the same place; another grandfather, father, and son enjoy ample leisure, perhaps under substantially unchanged conditions. This state of affairs is unfamiliar to our American democracy, and it is foreign to our habits of thinking. We do not ask a man to stay where he is, but rather to try to rise as high as he can go. We do not ask him to provide an economic basis for some one else's leisure, for the exercise of some one else's powers of reflection and of creation; but for his own. Therefore, in providing a system of

formal training adequate to our nation's needs and hopes, we must not assume that any given youth is forever to be shut out from leisure and its enjoyments; we must on the contrary show him how leisure is gained and how worthily enjoyed, and set him on the way to gain and to enjoy it.

Hand and eye training

One other elementary principle is of importance. The manual industries, as well as the fine and the useful arts imply, for their successful prosecution, co-ordination and co-operation of eye and hand, and a certain amount of trained dexterity. The training of the motor powers which are involved in developing these processes is itself an essential part of a sound general training, as it is training in one or more of the forms of expression. For, of course, thought may be expressed by drawing, by painting, or by making, as well as by language. In other words, hand or manual training has an intellectual reaction, if properly planned and interpreted. These facts mean that certain acts or stages of motor training are useful both as training for vocation and as training for avocation.

The fundamental truths that have been very briefly stated are easily applied to our American educational problem.

The American youth should be taught, whenever and so far as possible, to enter into and take hold of American life at a given point. Training for vocation will provide the "given point," but it must not be postponed to an age when only a handful of children will be able to profit by it.

Vocational training ought not to be included in the six years that are sufficient for the elementary-school course, properly so-called. The child is then too young to enter wisely and economically upon vocational training, and, moreover, every hour of his school life is needed for instruction in the use of the elemental tools and facts of civilization. He can, however, and should, then receive that preliminary training of his motor or expressive powers which, as has already been pointed out, is useful afterward to build a vocational training upon.

Vocational training follows elementary instruction

When once the six-year elementary-school course is completed, however, then vocational training should be given its place. While every possible avenue of advance should be kept open for the boy or girl who looks forward to completing a general secondary-school course, or to entering a college, vocational training should be provided for the vastly larger num-

ber who have no such purpose. They should be able to get the whole of a training intended for themselves, and not merely part of a training intended for some one else.

Special vocational schools

This vocational training will, if wisely organized, take on two distinct forms. There will be special secondary schools of two, three, or four year courses for those boys and girls who are able to give their full time to school work and who choose one of these vocational secondary schools in preference to the general secondary-school course. There will also be continuation schools, with evening instruction, for those children who are compelled to become wage-earners as soon as the compulsory-education and child-labor laws will permit them to do so.

It is important that these schools be genuine vocational schools and not merely schools with a smattering of vocational instruction. Training for vocation is a necessary part of education, and it must be done thoroughly. The more completely the vocational schools are adapted to workshops, and the more completely their organization and discipline conform to workshop conditions, the better. It is vital, too, that principles be taught with processes, and illustrated by them; for the

boy or girl who understands the principles underlying a given process, will be the most likely to rise to a position of superintendence or control. The German people have kept this point well in mind in developing their admirable vocational schools, and they are already reaping the practical advantages of it both as a nation and as individual workers.

Both in the elementary and in the vocational schools, the teacher's duty is to sow the seed of ambition to participate in and to enjoy the intellectual life, and to keep insisting that there is a higher aim than industrial skill or success, for which those are to prepare the way. Through response to this stimulus, the individual pupil must do for himself what he can by reading, by conversation, and by study and love of the great public collections of art, history, and science which the museums of the large cities are rapidly bringing together for the benefit and enjoyment of the public.

Vocational training and liberal learning

It is a grave error, therefore, and one which gives rise to many misconceptions and many mistakes of judgment, to set vocational training and liberal learning in sharp antagonism to each other. The purpose of the former is to pave the way to some appreciation of the latter and to provide an economic basis for

it to rest upon. The equally grave error of the past has been to frame a school course on the hypothesis that every pupil was to go forward in the most deliberate and amplest fashion to the study of the products of the intellectual life, regardless of the basis of his own economic support.

Something might be said, too, about the desirability of work for work's sake, because of its ethical value, and about the unwisdom of permitting the children of the well-to-do to escape the discipline and the advantage of labor, intellectual or physical.

True vocational preparation

The younger generation shows many signs of being too impatient to prepare for life. The old notion that a child should be so trained as to have the fullest and most complete possession of its faculties and its competences, in order to rise in efficiency, to gain larger rewards, and to render more complete service, is too often pushed aside by the new notion that it is quite enough if a child is trained in some aptitude to enable it to stay where it first finds itself. Of course, under the guise of progress, this is retrogression. Carried to its logical result, it would mean a static and a stratified social order. It would put an end to individual initiative and to individual op-

portunity. It is not difficult to foretell what results would follow both to civilization and to social order and comfort. The basis for any true vocational preparation is training to know a few things well and thoroughly, and in gaining such knowledge to form those habits of mind and of will that fit the individual to meet new duties and unforeseen emergencies. This is the real reason why the traditional training given at the University of Oxford has produced such stupendous results for generations. Of course, the Oxford training has had, to some extent at least, selected material to work upon; but it has done its work amazingly well. Whether in statesmanship or at the bar or in the army or in diplomacy or in large administrative undertakings in business, the man trained at Oxford has won first place by reason of the character and quality of his performance. No such result has been obtained, and no such result need be expected, from a school and college training which is a quick smattering of many things. At the bottom of the educational process lies discipline, and the purpose of discipline is to develop the power of self-discipline. When discipline is withdrawn, dawdling quickly enters, and the habit of dawdling is as corrupting to the intellect as

The Oxford training

Discipline and self-discipline

it is to the morals. The patience to be thorough, the concentration to understand, and the persistence to grasp and to apply, are three traits that very clearly mark off the truly educated and disciplined man from his uneducated and undisciplined fellow, and they are precisely the three traits which are most overlooked and neglected in the modern school and college curriculum. A school is supposed to be modern and progressive if it offers something new, regardless of the fact that this something new may be not only useless, but harmful, as an educational instrument.

With the growth of democracy the need for self-discipline becomes not less, but far greater. When great bodies of men were controlled by power from without, then they were in so far disciplined; now that in all parts of the world men are shaping their own collective action without let or hindrance, the need for self-discipline is many times greater than it ever was before. In an older civilization self-discipline was necessary for the protection of individual character; to-day it is necessary for the protection of society and all its huge interests.

Too much slovenly reading, particularly of newspapers and of magazines, but also of

worthless books, stands in the way of education and enlightenment. In no field of human interest is the substitution of quantity for quality more fraught with damage and disorder than in that of reading. The builders of the Constitution of the United States and the great lawyers of the colonial and early national period knew but few books, but the books that they knew were first-rate books and they knew them well. Nothing contributed so much to the fulness of their minds, to the keenness of their intellects, or to the lasting character of the institutions that they built, as their reflective grasp on a few great books and on the principles and literary standards which those books taught and exemplified. Such a task as that which Gibbon set himself over a century ago would be impossible to-day, even for a syndicate of Gibbons. There are too many books now to enable another *History of the Decline and Fall of the Roman Empire* to be composed. Productivity of the highest type is checked by the excess of facilities. This is true both of books and of physical apparatus. We could get along well with far fewer books and far less apparatus, and we should be likely to get more ideas and a higher type of human being.

What has been said relates chiefly, or most directly, to the advantage of the individual who receives the training. The interest of the community, of the nation as a whole, in vocational training is no less great and no less direct. Thus far, the American people have prospered greatly because of the enormous natural resources spread out before them. This condition is now coming to an end. Hereafter, waste must give way to thrift, and rough guesswork to careful planning. This means that trained industrial skill is a factor in the nation's prosperity. To escape from what Bismarck once called "the educated proletariat" we must have a care that those who gain leisure, or have it given to them, unite with it a capacity for skilled labor. Avocations need vocations to keep them from harm.

VII

STANDARDS

An address before the Girls' Club of St. Bartholomew
Parish, New York, February 1, 1909

STANDARDS

Importance of the individual

In a great city like New York, where population is counted by the million, and in this huge country, where we habitually think and speak in terms of nine and ten figures, it is very easy to lose sight of the fact that after all the most important thing in the world is the intelligent, well-balanced, high-minded individual human being. When one reads and talks and hears lectures and discussions nowadays on ways in which the world is going to be improved, he finds himself usually confronted with a formula, or a law, or a principle of some kind which is expected to bring about the desired improvement. One gets the impression somehow or other from all this that you and I as individuals have nothing left to do, but that everything is going to be done for us by the government—by the legislature, by the Congress, by the courts—or by some new way of controlling business, or by some new mode of distributing wealth, and all the rest of the dismal and familiar jargon of the day. But the more you think about it and the

longer you look at your own individual world and life and what goes on in it every day—the mere struggle for existence even—the more carefully you reflect on what influences and directs and compels you, the more clearly will you see that there is no escape from the individual responsibility which rests on each one of us. The only way in which things can be made more nearly as they should be in this city, in this nation, in this world, is by our individually making them so. It cannot be done by passing laws, however good. It cannot be done by the action of the board of aldermen. It cannot be done by the action of the legislature. It cannot be done even through new societies and organizations, or by new social projects, or political schemes. Through you and me in our daily lives whatever is to be done must be done. We have each of us to lift our share of the load, and that share consists always primarily of our own selves.

It is highly important that we should give close and constant attention to the standards that we set before ourselves; the standards by which we measure and test what we do and plan to do every day of our lives.

The setting of standards

We sometimes forget what an important thing a standard is, how precious it is, how

carefully it is to be determined and looked after. Have you ever stopped to reflect that when you speak of a standard of weight, like a pound, or a standard of length, like a yard, you are speaking about something that the governments of the world have spent great amounts of money to determine, and when determined to keep just and accurate? When you buy or sell a pound of sugar, or when you buy or sell a yard of cloth, you use a term that is so familiar that you probably never stop to think that in Philadelphia at the United States Mint, in Washington at the Bureau of Standards, in London, in Paris, in Berlin, and in the other great capitals of the world, these and other similar standards are kept under glass where no one can touch them. They are kept at an even temperature, because if it grows hot they are altered by expansion, and if it grows cold they are altered by contraction. These standards are preserved under the most careful supervision, in order that somewhere in the world there may be a fixed measure to go to in time of doubt or difference of opinion or dispute. In a shop you measure a yard of cloth in a hurry and you do it pretty accurately; you do not miss the full or exact yard by very much. You put a pound of

sugar on the scales and weigh it; you do not miss the precise weight by very much. Your results in both cases are reasonably accurate and will do for all practical purposes. But somewhere in the world there must be a standard that is not only pretty accurate, but absolutely accurate. That standard is the yard, or the pound, that we have in mind when we talk about the standards of weight and measurement, and not the approximations to these which we make in daily life.

If governments and civilized men generally think it worth while to take such pains and go to such trouble and expense to find out proper standards of weight and measurement, and to keep them where dust and heat and cold cannot affect them, in order that they may be really standard, what are we to think about our standards—those that we set up to test ourselves by, in order that we may know whether we are doing the whole of that which we ought to do?

Standards of personal conduct

The full effect of this question can be made clear by a few illustrations taken from daily life. One cannot help noticing what wretchedly poor and incorrect and vulgar English is spoken by children coming from school, children that in the classroom will speak with al-

most pedantic accuracy and grammatical correctness. Those very same boys and girls when they come out on the street to play forget the standards to which they conform in school, and the passer-by hears a form of speech which bears no resemblance to that used in the presence of the teacher. On the street the child uses the form of speech which it is customary for him to hear from his companions and at home. The lesson of this observation is that it is not much use to have theoretical standards if one is constantly in association with influences that pull them down, that depart from or contradict them. We act and speak chiefly through imitation. We do and say the things that we see and hear done and said. Therefore, our associations determine in very considerable measure what sort of acts we do and what sort of words we use, even though we have a standard laid away somewhere that is out of the reach of dust and heat and cold, but yet a standard that does not shape and affect our daily lives.

The surest test as to whether a human being is civilized or not is the way in which that human being acts and expresses himself. It is of the highest degree of importance that men should have truly civilized standards of

action and truly civilized standards of expression, even though we depart from them temporarily through forgetfulness or carelessness —standards to which we try to repair whenever we stop to think about what we are doing and saying. We have all of us been taught, even those who have been at school for the shortest period, the simple, elementary rules governing our English speech. Yet how many of us, knowing those rules, from force of habit, through association, or because of bad example, depart from them and habitually use the most extraordinary, ungrammatical, inaccurate, and incorrect expressions?

Bad habits of speech

As one goes about in crowded places, a very common expression to meet the ear is this: "I says to him, says I." This is an expression that no human being would ever use if his ears really heard it. It is only because the speaker does not really hear it, does not know when he is using it, that he departs so entirely from the ordinary standards observed in our daily speech. A great many persons seem to think that correctness of speech is a matter of individual temperament, and that it is apt to accompany certain lackadaisical characteristics of manner. The truth is quite the contrary to this. Few things so completely reveal the kind

of person one is as the sort of speech he uses. One need not use the speech of the formal lecturer; one need not use the long, involved words and phrases which sometimes mark the writing even of reputable authors; but any one who listens and who understands what he says and hears, who thinks and speaks with simple correctness and dignity, without affectation, without straining for effect, and especially without imitating the newspapers—that person is applying a standard of speech which indicates an advanced stage of civilization.

Lincoln's English

In a very few days this whole nation will celebrate with appropriate exercises the one hundredth anniversary of the birth of Abraham Lincoln, the greatest personality that ever lived on this continent. An extraordinary thing about that man is that, born in squalor and brought up in poverty—such poverty as probably no one of us has ever known or approximated, no matter how hard our conditions may have been—sent to school for the fewest possible number of days, yet he delivered some of the greatest orations in the English language. Some of the most splendid, simple, and direct English that we know was the English of Abraham Lincoln. Where did he get it? He got it just where others can get it, from his

very simple and direct nature that reflected without guile and without complexity the impressions and convictions that he had. His style was influenced largely by three books, the English Bible, Bunyan's *Pilgrim's Progress*, and *Aesop's Fables*. I suppose that there are not in existence three better books to read than those. Quite apart from any message that they contain, if we desire to get a standard of English speech that will be simple, correct, and dignified, they may well be our model. The noble English of our Bible, the simple narrative English of John Bunyan's *Pilgrim's Progress*, and the vigorous and direct English into which *Aesop's Fables* were turned were the source of Abraham Lincoln's English. They can be the source and the standard of the English of millions of others as well.

Newspaper English

No one who writes and speaks of pure English can pass by the influence of the modern newspaper. It is hard to estimate with accuracy the probable damage that it does every day to our standards of speech and taste and appreciation. Even to look at the front page of some widely circulated newspapers is to insure a moral and æsthetic disturbance. We buy them for one cent in the morning, and again for one cent at night. We have always before

us their extravagant, vulgar, shrieking headlines in large capital letters and bad English, which try to seize us by the collar and to hold our attention, while at the very same moment they are undermining every principle and standard of speech to which we ought to hold fast. One wonders sometimes how a great population like that of America manages to stand those daily and twice daily assaults upon its standards. We must learn to protect ourselves against that sort of thing, and the only way in which we can do it is resolutely to turn our attention and interest toward something else; toward something that is really worth while, and that enters with more genuine value into our daily life, and to seek the companionship and counsel of those few newspapers that really have standards and try to enforce them.

Influence of surroundings on standards

We are surrounded now by objects which reflect and are examples of sound, permanent standards of taste. The whole face of American cities has changed in a generation. Almost all of this new and splendid architectural work and decoration which we see about us has been done in the last twenty or twenty-five years. Each one of these stately and beautiful objects makes a direct appeal to you and to me through our taste, our judgment, and our standards of

appreciation. When we stop to look at one of these beautiful modern buildings, whether it is a great library, or a university building, or a great hotel, or a well-designed apartment-house or department store, we are in the presence of something that really represents civilization, and something that we may well be glad to reflect upon and try to understand and enjoy as part of our appreciation of what we see as we go through these crowded and busy streets. We forget how much of the time people are looking elsewhere for something that is right before their faces. The commonplace and the familiar will usually reveal to each one of us that of which we are in search, if we only have patience to observe and to reflect upon our observation.

Selfishness versus standards

It is very easy to misinterpret and to be flippant about familiar things that reveal our standards or lack of them. There is an amusing story which illustrates this. A teacher trying to teach a class of boys something about good manners and morals endeavored to be very practical in his work. He therefore asked one of the students before him this question: "Suppose that you should enter a street-car at the same time with three women, and there was only one vacant seat, and you

rushed forward and took that seat, what would you call that?" The teacher was trying to show how easy it was to be selfish, and how easy it was to recognize selfishness in some of its commonplace forms. But he was disconcerted when his pupil very promptly answered: "I should call that presence of mind." The boy was not thinking of what his teacher was trying to illustrate to him, what courtesy is, what good manners are and unselfishness. He was only thinking what his act would get for him, namely, a comfortable seat. That is usually the trouble when we set about applying standards of conduct. We generally want them applied by some one else. A very distinguished statesman said not long ago that it is becoming the ruling passion of the American people to give advice to others, to mind other people's business. There is more truth than fiction in that. We can always get advice as to how to mind our business, but we do not often get principles and rules set before us that will teach us how best to manage ourselves.

The average man does not stop to think about this matter of standards nearly as much as he ought to. If it seems worth while to the government to spend tens of thousands of dollars to find out what a yard actually is,

and what a pound actually is, and then to keep the standard yard and the standard pound where nothing can happen to them, how much more worth while ought it to be for us to find out what our standards of speech, taste, and conduct ought to be, and to keep them where no harm can come to them? The great trouble is, especially in this modern life, where we live lives that are so full, where we are so terribly driven to get the day's work done, to make a living, that when a moment of leisure really comes, so many different things appeal to us to distract our attention and to press us this way or that, it is very difficult for us to learn to know even a few standards and to apply them.

There is no greater need in American life than for the steady, persistent application of sound standards in our individual lives. The average human being comes into the world and moves through it for a short space of time very much as a little chip may be seen floating on a swiftly moving stream. It is borne on, it is tossed about, but at last it comes to smooth water and rests there; not by reason of any act of its own, but by reason of the action of the stream on which it is borne. Most of us are borne helplessly along the rapidly moving

stream of life in similar fashion. Whenever a man or woman appears with strength and character and general intelligence and ability enough to guide and direct his or her own movements, we recognize the presence of a strong personality and a great leader. The whole world looks at such a person with admiration.

Self-mastery

There are a few real leaders in the world, and these leaders who have power, whether it be in the realm of thought, in literature, in science, in government, or in the conduct of daily life, we naturally turn to and regard with enthusiasm and reverence, because human leadership is a very fine and splendid thing. While great leadership and distinction may readily be denied to most, nobody can deny another the privilege and the opportunity of seeking to know and to apply the best standards to himself. There is one nature and one mind and one set of actions that each one of us can lead and direct. There is one person of whom we can take control. Slowly and gradually we can bring that person to give up mere imitation and artificiality and conform his conduct more and more to standards of his own choosing. We can determine whether those standards shall be good and high, or

whether they shall be common and low. Fortunately, nobody has ever tried to organize society on the lowest and meanest estimates of human nature. We are always thinking that the world is going to be better, that we are going to improve, and that the march of progress is up and not down.

Self-improvement

If it were in my power to prescribe effectively for the betterment of this city and country, I would at once ask of each individual three very simple things, and three things which every individual has it in his power to accomplish. I would ask him to improve his speech, to improve his manners, and to improve his standards of taste and appreciation.

You cannot tell from a person's occupation what sort of a man he is. One's occupation is not always a matter of his own choice. We take such work as we can get, and not always the work that we most like. On the other hand, you can always estimate a human being from the use he makes of his leisure. When one has a leisure moment, such as a half-holiday or a holiday, then he does the thing he most wants to do, or that he is most inclined to. The real tendencies and standards of a human being are clearly revealed by the use of his leisure.

So in choosing standards of speech, standards of personal manners and conduct, standards of taste and appreciation, one must watch carefully the use that he makes of his leisure, his spare time—those moments or days that occasionally come to us when we can do as we please. Then it is that we reveal ourselves according to our natural tastes; then it is that those who observe us can tell what our standards really are. Standards are not wholly things of stone, or bronze, or silver, or gold, but are more often unseen things, like ideas. Nobody has ever seen an idea, or felt one, or held one in his hand; but in the whole world there is nothing so powerful as an idea. The ideas which pass through the human mind all have tendencies to influence our movements, and we need to be very careful as to the ideas we allow habitually to occupy our minds, for these ideas influence the acts which reveal our standards.

The little things by which we shape our daily life are the things by which our character is at once revealed and tested. Not one person in a hundred thousand is going to be recorded or written about in history, even ephemeral history. This fact should not be allowed to make any difference in our indi-

vidual lives. It is each human mind and soul that counts, whether conspicuous or not. Some lives may be more conspicuous than others, more eminent, more generally serviceable, but for all that they cannot take the place of the one life which is intrusted to each one of us. We make and choose the standards for our own lives, and we must both apply them and be held responsible for them.

VIII

WASTE IN EDUCATION

An article written for *The Outlook*, New York,
August 6, 1898

WASTE IN EDUCATION

An intelligent parent, who cares about education, and who thinks about it, told me not long ago that his boy of fourteen and a half years was in rude health and ready to pass the Columbia College entrance examinations. He expressly disclaimed the idea that the boy had unusual ability or power of application, and attributed the result solely to the fact that his son's education up to this point had been carefully planned. On the other hand, an assistant superintendent of schools in New York has recently stated that he frequently finds pupils of seventeen or eighteen in the upper grades of the elementary schools. It is obvious that their education had not been planned. Lack of plan, bad plan, stupid plan, ignorance in plan—these are the causes of the waste in education that is so frightful in the United States.

Rigid system a cause of waste

A plan for a child's education may or may not involve much system. To identify a plan with a highly organized and wasteful system is one of the blunders most commonly made.

Detailed systems are usually wasteful when rigidly administered, because, in the anxiety to make them symmetrical and to have them look well, their administrators lose all sense of proportion. If a child, on mastering the words given on the first twenty pages of his Second Reader, is able, with a little help, to read intelligently in the Third Reader or even in the Fourth—and not a few children are able to do this—it is both wasteful and a form of fetish-worship to keep him dragging through the intervening pages. Nowadays the less that children see of Third Readers and Fourth Readers the better; but the illustration holds. Boys who go to college at eighteen have, as a rule, spent from one-sixth to one-fourth of their entire school life in studying mathematics. Yet they know very little mathematics; what they do know they usually know very imperfectly. They have wasted untold months, perhaps years. The mathematics superstition is still very strong in this country, although its influence is visibly diminishing. Mathematics is commonly thought to be more "practical" than literature, or science, or history, which is not true; and to be an unrivalled training for the reasoning powers, which is easily disproved. Mathematics has an indis-

pensable place in education, of course, but that place is a much more subordinate one than it has been in the habit of occupying in America. It is, as now administered, a very wasteful subject of instruction, and more than any other it impedes the improvement of the average course of study. The child first "goes through" a primary, or elementary, arithmetic; then he "goes through" an advanced arithmetic, devoting more than half his time to the identical topics contained in his former textbook. This is simple waste, of course. The problem of the arrested development of children, which is the most fruitful field of investigation that lies before the child-study specialists, is bound to engage more and more attention; and I am of opinion that the closer we get to it the more clearly will it appear that mathematics, as it is taught, is a chief offender. I am familiar with a public-school system in which much time is given to mathematics. The elementary-school children study it for many hours each week. Those of them who get into the high school keep at it with the same devotion and energy, and study pretty much the same subjects as they did when in the elementary schools. When the brightest high-school graduates pass over into the city

training class to fit themselves to teach, the asking of three questions is often sufficient to prove that they do not know any mathematics, that they have not the dimmest idea of what it is all about, and that its boasted power of logical training has been wholly lost on them. What it has done is to keep them from learning something else. So they are taught the same mathematics again. This is not an isolated, but a fairly typical, instance of what is going on all over this country.

How to plan a child's education

To plan intelligently for a child's education means to keep him constantly at something that is new and something that is real to him, something that is adapted to his capacity and related to what he already knows. It is to make a plan for a particular child; but it may involve grave error to copy it exactly for his brothers or sisters or cousins or friends. It is to make a plan that aims to discover and to develop capacity, no matter how young the child may be. Whatever the variations in detail, literature and nature-study should be the earliest and ever-present elements of any plan. From the hours that a child spends in his mother's arms, he should be brought into contact with the material and the form of genuine literature, literature that means some-

thing. This does not mean Homer or Dante or Shakspere, of course, but the fairy-tales, the myths, and the nursery rhymes that are part of the literary inheritance of the race. A boy ought to know a good deal of literature, to love it, and to have caught a bit of the literary spirit, if only by imitation, even before he knows by sight more than half the letters of the alphabet. From his first stumbling steps about the nursery he should be kept similarly in contact with nature in some form. Animals and growing plants should be his earliest teachers in nature-study, and when he first takes his seat in an organized school, a considerable number of the facts of nature should be familiar to him and he should be truly appreciative of them. To the query as to how this is possible, it may be bluntly answered that it is possible because it has been done and is being done all the time by intelligent and observant mothers. Of course, if the child is so unfortunate as to be given at this time the task of acquiring some facility in speaking French or German, from association with a nurse-maid or a nursery governess, at the expense of gaining an idiomatic and careful use of the mother tongue, and if all his mental energy is turned inward instead of outward,

then an educational chaos is likely to result that does incalculable damage and prevents any number of good things from taking place in his mental life.

Once in school, the chief elements of wasted time for the child are: (1) annual, or even semi-annual, promotions that may not be departed from; (2) reviews and examinations in the interest of so-called thoroughness; and (3) bad teaching.

The system for the child, not the child for the system

A school that moves forward in February or June in solid phalanx, and then only, might do for wooden Indians, but it is not suited to growing human beings. A pupil ought to be changed in grade just as often as it is apparent that he is either overtaxed where he is, or that he is not taxed enough. Theories must give way to facts. The system is for the pupils, not the pupils for the system. Of course, to deal with the needs and capacities of each pupil costs trouble; but then all education is more or less troublesome to somebody. It worries some principals and teachers to think that a pupil promoted in November, for instance, will be likely to "lose" all that his old class goes over from November till February, and all that his new class has gone over from September to November. What

there is to worry about is a puzzle to me. It seems rather a cause for congratulation that this particular child can get along without some scraps of information that others seem to need.

Thoroughness

The fetish of thoroughness is another form of the pedagogue's paganism. To know a thing thoroughly does not necessarily mean, happily, to be able to call it by name, or to recall it on any and every occasion, but to know its relations to other things or occurrences, its causes and its effects. That sort of knowledge comes, and can only come, from reflection. To do a thing or to repeat a thing over and over is by no means to reflect upon it. Repetitions are not always reviews, and memory tests are rarely examinations. A review and an examination should always be reflective in character. Then they make for real, rather than for sham, thoroughness; then only are they genuine educational exercises. To ask a boy to prove the theorem that "Triangles which have an angle in each equal, and the including sides proportional, are similar," may or may not show that he knows what he is talking about. But to ask him, "What is meant by the similarity of triangles? When are two triangles similar, and why?" will very

soon enable you to ascertain whether the boy is really learning geometry or not. The best and fairest sort of examination is one that asks pupils no question that they have ever seen before. To answer such questions correctly requires the power to think, not merely the ability to remember; and it is the power to think that we are trying to train and to test. Besides, it is just such questions that real life will put to the child continually when he grows up.

Bad teaching

Finally, there is bad teaching, without mention of which no paper on education is quite complete. As it is practically impossible to secure the dismissal from public-school positions of hard-working and deserving young women "simply because they cannot teach," we are likely to have this chief cause of waste with us for another century or two while public opinion is learning what education really means. In private schools, however, the task of getting rid of incompetent teachers ought to be easy. Intelligent parents ought to find out what good teaching is, and withhold their children from anything else. But my observation is that they do not do this. A certain type of parent will ask which private secondary school is fashionable, or which has the best

athletic record, or which sent the largest number of boys into college last year without conditions; and, on finding out about these things, they throw their innocent children into the hopper. The burden of proof is nowadays on a financially successful school; it must demonstrate that it really educates, despite its success. On the other hand, it will not do to go to the opposite extreme, and infer that when a school is a financial failure it is because of its excellence. That is bad logic.

No parent can afford to send his child to a teacher who does not habitually make special preparation for every lesson or class exercise. The oftener a lesson has been given the more wooden it is likely to be, unless special thought is given to its presentation. Time not prepared for is, in school life, time wasted. No single element contributes so much to live, practical teaching as careful preparation for every lesson.

Differences between children

Another and very prolific source of waste in education is due to the time-honored illusion that all boys and girls are born equal—equal to anything, apparently. The blessings of the principle of choice, which in higher education is known as the elective system, are being so rapidly extended, however, that this

obstacle to progress will be steadily diminished. Choice may sometimes be exercised by a parent on his child's behalf, but as soon as capacity and taste begin to show themselves the pupil will do his own choosing, to the immense benefit of his moral, as well as of his intellectual, nature. To overtax the nervous system of a child is in the highest degree wasteful. Not to have him take ample time for systematic and vigorous physical exercise, preferably in the open air, is wasteful. To allow or to compel children to carry on more than four, or at most five, subjects of study at one and the same time is wasteful. For the parent or the teacher not to know about the laws governing a child's physical and mental growth is excessively wasteful. Read, for example, Doctor Francis Warner's *Study of Children* and Preyer's *Infant Mind*, and see how much light they throw on what is going on before our eyes every day, and to which we are, as a rule, wholly blind.

Poor educational literature

Even so good a thing as the present widespread revival of interest in education has been productive of waste, by putting into the hands of undiscriminating readers a mass of what has been appropriately termed stuff, bearing the name of educational literature.

Some of the books and periodicals that purport to deal with education are enough to make one regret the invention of printing. To paraphrase one of Speaker Reed's happy characterizations, they cannot be read without subtracting from the sum of human knowledge. Some of them bear otherwise reputable names. But they are simply dreadful. Yet they are often read, sometimes quoted, and occasionally followed. Untold waste may be attributed to this source. A pressing need in education to-day is an index that will pillory the bad books and the hopelessly befogged and routine educational journals.

The most serious aspect of the waste that surrounds us on every side is not the waste of time; that could perhaps be endured. It is the dissipation of energy, the loss of effectiveness, the blunting of natural capacity and aptitude. As a result, we grow accustomed to low standards of performance and to acquiesce in them. We open our eyes in amazement at what is only fitness or adaptation of an individual to his task, and call upon the word genius to hide our inability to explain how it happened.

A strange thing is that almost every intelligent person accepts these principles as soon as

IX

THE CONDUCT OF THE KINDER-GARTEN

An address before the Kindergarten Department of the National Educational Association at Los Angeles, California, July 12, 1899

THE CONDUCT OF THE KINDER-GARTEN

There are two well-known and easily distinguishable forms of educational criticism. There is, first of all, that of the censorious critic, who seeks for weaknesses in points of detail, who lacks equally a sense of proportion and a sense of humor, and who overlooks the fact that in the working out of great fundamental principles, not even the greatest of them flows to its full application without some slowing of the current or some eddy in the stream. Such is the criticism which tends to ridicule, to break down, to destroy, and it is wholly unworthy of attention in any form.

There is, on the other hand, a criticism which is sympathetic, which is appreciative, and which, with some insight into the aim and methods of an educational movement, points out ways and methods of strengthening and improving that movement with the declared purpose of building up a more enduring educational superstructure.

Having, as I have, so profound an admira-

tion for the spirit, methods, and aim of the kindergarten, and being so absolutely convinced, not only of its excellence as an educational factor in its own place, but of its value as an inspiration to all education, it would be quite impossible for me to meet this department in any spirit but that of a kindly and constructive criticism.

Froebel and Hegel

You are, of course, familiar with the statement, often made, that the philosophies of Froebel and of Hegel, containing the deepest insights of the German philosophy of this century, are more popular in the United States than at home. The inference is drawn that Germany has outgrown their inspiration and motive power; and the inference is equally suggested to us that we are trading here upon second-hand material. I do not believe that to be true. It is certainly true that the kindergarten is to-day upon a higher plane, is more efficient, more wide-spread, and more honored in America than in any other culture nation. I cannot interpret that fact to our discredit. It is equally true that the great seed-thought of Hegel—the evolution of the human spirit, reflecting the single principle, common alike to nature and to mind, which is rightly called divine—it is true that that

seed-thought and that insight into life are more highly esteemed, more studied, and more fully applied to-day by American scholars than by those of any other nation. I cannot interpret that fact to our discredit. If Germany has seen fit to turn her face, in part at least, toward some gods which others can but consider false, and away from the wisest of her teachers, this will but fasten our hold the stronger on those truths of which we seem so sure.

Is the kindergarten too formal?

One criticism which is made in a constructive spirit upon the work of the kindergarten is that it often exalts the letter above the spirit; that it tends to make static, definite, and permanent the forms of procedure, kinds of material, and methods of intellectual, moral, and social development, which are not ends in themselves, but rather rungs of a ladder by which the child-spirit climbs to a higher viewpoint from which outlook on life becomes broader and richer. There is basis for that criticism. One danger in which the kindergarten has stood lies in what may be called the worship of literal form as distinguished from exaltation of the spirit, which clothes itself in ever-varying forms. How has that come about when the real spirit of Froebel,

like the real spirit of Hegel, is so clearly and surely a principle of development? There is only one answer to that question. It is because in some parts of this country the kindergarten movement, appealing to the philanthropic instinct of men and women not highly trained to think, has furnished them with educational material which they have seemed to understand, and with which they have too often been satisfied. In other words, the sure method of escape from that particular lowering of the tone of kindergarten thought and practise lies in the one thing which the kindergartner most needs to-day—wider scholarship. It is too often supposed that because the kindergarten teacher is dealing with the very young child, an emptiness of mind coupled with amiability of disposition will suffice to direct the child's spiritual development. A stupid person may perhaps direct education at that stage where some adequate consciousness of the subject-matter is had by the pupil himself; but no wisdom is too great to deal with the young child, who can approach his subject-matter through symbols only.

What is most needed to-day in this work is a higher standard of excellence in the training of kindergartners. I mean a broader general

preparation, a more wide-spread conviction as to the importance of thorough preparation. The resources of literature, science, art, and music must be drawn upon to the largest possible extent. It is all well enough to learn, partly by instruction and partly by a period of apprenticeship, something of the mode of kindergarten procedure. But unless that procedure be inspired and illuminated by a grasp upon general culture and modern scientific information, nothing but a formal and barren education will result.

Too many low-standard kindergarten training-classes are at the bottom of some of our faults. They have low standards of admission, low ideals of training, and are too often satisfied with training in technic and form, trusting that time will repair the damage or experience remove it. That kindergarten teacher who is not constantly and continually a student, and a student along those great lines of human effort which I have named, will sooner or later dry up her inspiration at its source. First of all she must have scholarship, not only in entering upon the work, but afterward as well; a constant and broader study, which is truly philosophic, because comparative, and because it puts itself under

the guidance of the best teachers; one which is also practical in the highest sense because it brings its resources to a focus every morning in the kindergarten room.

The kindergarten not a separate institution

Another criticism which is sometimes made, and with which my observation leads me to find myself in sympathy, is that the kindergarten is often attached in an external manner to an organic scheme or school system, and is not conceived as an integral part of one process of child development. It was easy for such a condition to come about, because the kindergarten, in its inception, represented ideas which were wholly strange to the schoolmaster's mind. The kindergartners were, therefore, thrown back upon themselves, and incrusted themselves with a shell for protection. It is now necessary for us to make sure that the shell does not stiffen and harden, making growth impossible.

It is easy to mark off in large periods all development of the human mind. It is easy enough to mark off in large periods all growth of the human body. But who ever saw the body or the mind grow? The subtle process goes on before our eyes, wholly unseen, unobserved. It does not obey any arithmetical law; it is not subject to precise measurement

or to scientific observation. We gather up those things which we call marks of progress and dwell upon them, but we are unable to put our hand on the point where one stage passes into the other. Therefore the educational scheme which tries to base itself upon hard-and-fast periods is false to the vital principle of growth.

It is impossible to say how many years are necessary, in every case, for kindergarten instruction. I am confident that in the case of some children the symbolic period may be passed in one-half the time that other children may take; and we, believing in the principle of individuality and preaching it to others, must not fail to apply it to ourselves. This means that the child must be released for the elementary school as soon as he is ready for it—but no sooner—so far as we are able to observe and know.

I am inclined to resist the contention that the kindergarten is a course of study. I have no objection to "courses of study," in the sense in which the term is often used; but I object very much to the theory that the child who is able to take the third step must not be allowed to take it because he has not taken the second. I do not believe in holding a

child back for the sake of the "thoroughness" or "completeness" of the course of study. I believe the human mind in education should always be put at that task for which it is competent; and it is "pedagogical," not educational, to insist that every step be covered, no matter at what expenditure of time, when the power to advance more rapidly is present. Therefore, it is necessary for the kindergarten to beware of holding children back. We do not want the elementary school to hold back those who are ready for the high school; we do not want the high school to hold back those who are ready for college; or the college, those who are ready for the university. We cannot put the child of three to seven years of age in a strait-jacket and say that there he must stay for a fixed time, regardless of his natural ability or accomplishments.

Because the line of demarcation is so difficult to establish, it has become the duty of the kindergartner to acquaint herself in a general way (it is impracticable to do it in detail) with the principles, methods, and ideals of the elementary school. There must be the most absolute sympathy between the kindergarten and the grades above it; and we are in these days rightly calling upon teachers of the lower grades

of the elementary school to master the spirit of the followers of Froebel. Sympathy comes from mutual understanding and knowledge. In this way the kindergarten will become attached to the school, and no longer be a separate and distinct part of the educational scheme; it will take its natural place as one of the various stages in the growth of one living and organic human mind.

I know that there is a great demand that those who go into the kindergarten work shall know the principles of elementary-school teaching, and that elementary teachers shall go into the schools with a knowledge of the work and purposes of the kindergarten. This demand is made by the best educational sentiment and opinion. It remains for kindergartners to do their share in satisfying that demand by studying the principles of elementary-school work and by occasionally supplying elementary teachers from their own ranks.

The kindergarten and the home

It is sometimes said that the kindergarten is at war with the home; that these children of tender years should be under their mother's care; that it is unnatural for children of that age to be brought together in groups for instruction, however needful it may be. I hold the contrary opinion. I think that of all forms

of educational work, none has been so successful, as yet, as the kindergarten in reaching and uplifting the home; and the kindergarten which does not have a mothers' class attached to it is not a kindergarten in the best sense of the word.

Again, we sometimes hear it said that the kindergarten is an admirable thing for the children of the poor; that their children are neglected, dirty, unkempt, uncared for; that the children of the well-to-do need not be found in the kindergarten. In the first place, I resent such a distinction as wholly undemocratic and uneducational. In the second place, looking forward as I do to the next great educational problem of this country, which will be, not the education of the poor, but the education of the rich, I am forced to wonder how the children of the rich can afford to be without the advantages of the kindergarten. It is a serious thing when, in our social and economic efforts, a line of class distinction is drawn. We have only to look at England to see how, with her high ideals, great opportunities, and large expenditures for education, the people find themselves hampered at every turn in striving to effect reforms, by social and economic distinctions. We must not allow these to enter into our educational work.

The kindergarten and discipline

One more point is important because in that particular the kindergarten is widely misunderstood. You hear the criticism from the elementary-school teacher, made with the best of intentions, but from what I hold to be a wrong point of view, that the kindergarten is disorderly, that it has not the discipline and the definiteness of routine of the elementary school. The kindergarten is, therefore, held to be a disintegrating influence in the development of the child, and to increase the task of discipline later on. My reply to this criticism is that it arises from what seems to me to be a wholly false conception of discipline or order. Suppose an observer passing over this busy city in a balloon were able to look down upon its crowded streets, on which men and women are passing and repassing in every direction, each going to his appointed task without interfering with his fellow; would such a scene be one of disorder, because the human beings within the observer's field of vision were not massed in phalanx and controlled as a unit by a military drill-master? I think not. The scene would be one of a very high type of order indeed, one much higher, in fact, than the order of a marching regiment. Order is not an external form, but an inner habit—the habit of

going in a purposeful way, with due regard to the purposes and rights of others, about some definite thing, even though the lines cross and recross. To substitute for this high type of order a single, definite form is to substitute the order which is death for the order which is life; and my response to such a criticism is that I should prefer to see more of the kindergarten order in the lower grades of the elementary school and less of the elementary-school order in the kindergarten.

It is a striking fact, and one of the most hopeful signs to be found to-day in all education, that the two extremes of the educational process, the kindergarten and the university, are the two greatest conservators of individualism; and it is only as the individual is being rescued from the routine of the intervening school periods that these periods are rising to perfection and efficiency. The great hope of our school system lies in the fact that the spirit of individualism is working down from the university and up from the kindergarten, and that some day the two lines of development will meet and will hold the whole educational process within their spheres of influence.

X

RELIGIOUS INSTRUCTION AND ITS RELATION TO EDUCATION

An address at St. Bartholomew's Church, New York, under the auspices of the Sunday School Commission of the Diocese of New York, October 14, 1899

RELIGIOUS INSTRUCTION AND ITS RELATION TO EDUCATION

The problems of what is called religious education are part of the problem of education as a whole.

True education, as distinguished from the innumerable false uses of the word, is a unitary process. It knows no mathematically accurate subdivisions. It admits of no chemical analysis into elements, each of which has a real existence apart from the whole. When stretched upon a dissecting-table education is already dead. Its constituent parts are interesting and, in a way, significant; but when cut out of the whole, they have ceased to live. They are no longer vital, or truly educational. For this reason I hold that while there is and may be a religious training, an intellectual training, a physical training, there is no such thing as religious education, or intellectual education, or physical education. One might as well imagine a triangular or a circular geometry. We do not at once feel the force of this

statement, because of our loose, inaccurate, and inexact use of the word education.

Education part of the life-process

In my view education is part of the life-process. It is the adaptation of a person, a self-conscious being, to environment, and the development of capacity in a person to modify or control that environment. The adaptation of a person to his environment is the conservative force in human history. It is the basis of continuity, solidarity. The development in a person of capacity to modify or control his environment gives rise to progress, change, development. Education, therefore, makes for progress on the basis of the present acquisitions of the race. Its soundest ideals forbid, as a matter of course, both neglect of the historic past and the blind worshipping of that past as an idol. The importance of the past lies in its lessons for the future. When the past has no such lessons, we forget it as quickly as possible. The survival of a tendency, a belief, or an institution is evidence that it is at least worth studying and that it must be reckoned with. These tendencies, beliefs, and institutions are studied and reckoned with for the purpose of discovering their vital principles and of putting a value upon them. The working out of those vital principles is the future.

In this view, education is first and chiefly a matter of principles. Then, and secondarily, it is a matter of methods. The place, character, and function of religious training are to be settled, and only to be settled, by reference to fundamental educational principles.

Study of the environment

The first of these principles, and one of the most far-reaching, is discovered in framing an answer to the question: What is the present environment of a human being? What do we mean by the use of the word environment, and what do we include in it, when we speak of it as that to which education tends to adapt a person? We mean, I think, by the word environment, two things: First, man's physical surroundings, and, second, that vast accretion of knowledge and its results in habit and in conduct, which we call civilization. Natural forces play no small part in adapting human beings to both elements of environment, but the process of education is especially potent as regards adaptation to the second element—civilization. Civilization—man's spiritual environment, all his surroundings which are not directly physical—this it is which has to be conquered, in its elements at least, before one can attain a true education. It is of the highest importance that we make sure that we see

clearly all the elements of the knowledge which is at the basis of civilization, and that we give each element its proper place in our educational scheme.

We may approach the analysis of our civilization, or spiritual environment, from many different points of view, and perhaps more than one classification of the results of that analysis may be helpful. The classification which I suggest, and which I have stated elsewhere in detail,[1] is a fivefold one. It separates civilization into man's science, his literature, his art, his institutional life, and his religious beliefs. Into one or another of these divisions may be put each of the results of human aspiration and of human achievement. Education must include knowledge of each of the five elements named, as well as insight into them all and sympathy with them all. To omit any one of them is to cripple education and to make its results at best but partial. A man may be highly instructed and trained in science alone, or in literature, or in art, or in human institutions—man's ethical and political relationships—or in religion, but such a man is not highly educated. He is not educated, strictly speaking, at all, for one or more of the aspects

[1] *Cf.* pp. 24–38.

of civilization are shut out from his view, or are apprehended imperfectly only and without true insight.

Religious training essential to education

If this analysis is correct, and I think it is, then religious training is a necessary factor in education and must be given the time, the attention, and the serious, continued treatment which it deserves. That religious training is not at the present time given a place by the side of the study of science, literature, art, or of human institutions, is well recognized. How has this come about? How are the integrity and the completeness of education to be restored?

Forces separating religious training from education

The separation of religious training from education as a whole is the outgrowth of Protestantism and of democracy. A people united in professing a religion which is ethnic or racial, or a nation giving adhesion to a single creed or to one ecclesiastical organization, always unite religious training with the other elements of education and meet no embarrassment or difficulty in so doing. During the undisputed dominance of the Roman Catholic Church in Europe, education not only included religious training as a matter of course, but it was almost wholly confined to religious training. Theology was the main interest of the

Middle Ages, and the theological interest caused religious training to permeate and subordinate whatever instruction was given in other subjects. Music was taught that the church services might be well rendered. Arithmetic and astronomy were most useful in fixing the church festivals and the calendar. With the advent of the Protestant Reformation all this was changed. Religion was still strenuously insisted upon as a subject of study, but the other subjects of instruction became increasingly independent of it and were gradually accorded a larger share of time and attention for themselves alone.

Protestantism, however, would not by itself have brought about the secularization of the school as it exists to-day in France and in the United States. Democracy and the conviction that the support and control of education by the state is a duty, in order that the state and its citizens may be safeguarded, have necessarily forced the secularization of the school. Under the influence of the Protestant Reformation and that of the modern scientific spirit, men broke away from adherence to a single creed or to a single ecclesiastical organization and formed diverse sects, groups, parties, or churches, differing in many

details from each other—the differences, I regret to add, being far more weightily emphasized than the more numerous and more important points of agreement. When the state-supported school came into existence, this state of religious diversity found expression in dissatisfaction with the teaching, under state auspices, of any one form of religious belief. The first step toward the removal of this dissatisfaction was to reduce religious teaching to the lowest possible terms; and these were found in the reading of the Bible, the recitation of the Lord's Prayer, and the singing of a devotional hymn at the opening of the daily school exercise. But even this gave rise to complaint. Discussions arose as to whether a single version of the Bible must be used in these readings, or whether any version, chosen by the reader, might be read. A still more extreme view insisted that the Bible itself was a sectarian book, and that the non-Christian portion of the community, no matter how small numerically, were subjected to violation of their liberties and their rights, when any portion of the public funds was used to present Christian doctrine to school children, even in this merely incidental way. The view that the state-supported schools must refrain

absolutely from exerting any religious influence, however small, is one which has found wide favor among the American people. It has led to more or less sweeping provisions in State constitutions and in statutes against sectarian instruction of any kind at public expense. A judicial decision on this subject of great interest and of far-reaching importance is that rendered in 1890 by the Supreme Court of Wisconsin, in the case of the State *ex rel.* Weiss and others *vs.* the District Board of School District No. 6 of the city of Edgerton.[1] In this case the essential question at bar was whether or not the reading of the Bible, in King James's version, in the public schools was sectarian instruction, and as such fell within the scope of the constitutional and statutory prohibitions of such instruction. In an elaborate and careful opinion the court held that reading from the Bible in the schools, although unaccompanied by any comment on the part of the teacher, is "instruction"; that since the Bible contains numerous doctrinal passages, upon some of which the peculiar creed of almost every religious sect is based, and since such passages may reasonably be understood to inculcate the doctrines predicated upon

Is the Bible a sectarian book?

[1] *Wisconsin Supreme Court Reports* (1890), 76 : 177–221.

them, the reading of the Bible is also "sectarian instruction"; that, therefore, the use of the Bible as a text-book in the public schools and the stated reading thereof in such schools, without restriction, "has a tendency to inculcate sectarian ideas," and falls within the prohibition of the constitution and the statutes of Wisconsin.

In this decision there are some very interesting observations on the general question of religious training and the place of the Bible in education. The court says, for example: "The priceless truths of the Bible are best taught to our youth in the church, the Sabbath and parochial schools, the social religious meetings, and, above all, in the home circle. There those truths may be explained and enforced, the spiritual welfare of the child guarded and protected, and his spiritual nature directed and cultivated, in accordance with the dictates of the parental conscience." Judge Orton, in a supplementary opinion, adds: "[The schools] are called by those who wish to have not only religion, but their own religion, taught therein 'Godless schools.' They are Godless, and the educational department of the government is Godless, in the same sense that the executive, legislative, and administrative departments are

Godless. So long as our Constitution remains as it is, no one's religion can be taught in our common schools."

The Supreme Court of Wisconsin has in this decision given forcible, definite expression to the view held by the large majority of American citizens, and has clothed that view with the authority of law. It is in this sense and for substantially the reasons adduced in the decision which I have quoted, that the American public school is secular and that it can give and does give attention to four of the five elements of civilization which I have named—science, literature, art, and institutional life—but none to the fifth element—religion.

The secular schools of France

In France, the great democratic nation of Europe, the case is quite similar. The famous law of March 28, 1882, excluded religious instruction from the public schools, and put moral and civic training in its stead. M. Ribière, in defending this provision before the senate, used almost the exact language later employed by the Supreme Court of Wisconsin. He held that the elementary school, maintained by the state, open to all, could not be used to teach the doctrines of any sect; that it must be neither religious nor anti-religious,

but wholly secular, neutral. M. Paul Bert, who presented the measure to the Chamber of Deputies, pointed out that the "religious neutrality" of the school was the logical outcome of the principle of the freedom of the individual conscience. "In our eyes," M. Bert continued, "this argument has so great force that, without the prohibition of religious instruction in the schools, compulsory education would appear to us to be not an advantage, but a danger." In order that opportunity should be given to parents to provide religious instruction for their children—this is explicitly stated in the law—the schools are closed one day each week, other than Sunday. In France Thursday, not Saturday, as with us, is usually taken as the school holiday.

Limitations of the secularized school

This, then, is the condition of affairs in the United States and in France as regards religious training in education. The influence first of Protestantism and then of democracy has completely secularized the school. The school, therefore, gives an incomplete education. The religious aspect of civilization and the place and influence of religion in the life of the individual are excluded from its view. This is the first important fact to be reckoned with.

The second fact is that the whole work of

The family and the church as educational agencies

education does not fall upon the school. It cannot do so and ought not to do so. The family, the church, the library, the newspaper, society itself, are all educational institutions as truly as is the school. The school is the most highly organized of them all. Its aims and methods are the most definite. But it is quite untrue to suppose that nothing enters into education save through the medium of the school programme. Therefore, it does not follow that because the school has become secular, all religious influence and training have necessarily gone out of education. If the school is not distinctly religious, it is even more distinctly not anti-religious. The real question, then, is what are the other educational factors, especially the family and the church, doing to see to it that school instruction is rounded out into education through their co-operation? It is the duty of the family and the church to take up their share of the educational burden, particularly the specifically religious training, with the same care, the same preparation, and the same zeal which the school gives to the instruction which falls to its lot.

Before coming to the implications of this position, there are one or two suggestions

Religious belief universal

which must receive passing notice. It is said—by a very few it is true—that there is no such thing as religion other than mere superstition, and that religion is not universal in any event, and therefore that the fifth element of our civilization is but an empty name. It is urged, with Petronius, that fear first made the gods, and with Feuerbach that religion is man's most terrible ailment. These contentions seem to me to arise from simple ignorance, alike of history and of human nature. There is a response from the human heart and from the recorded thoughts and deeds of civilized men, based neither on credulity nor on fear, to the description of Hegel, that "religion is for our consciousness that region in which all the enigmas of the world are solved, all the contradictions of deeper-reaching thought have their meaning unveiled, and where the voice of the heart's pain is silenced—the region of eternal truth, of eternal rest, of eternal peace." If religion may be defined, in Doctor Martineau's words, as "the belief and worship of Supreme Mind and Will, directing the universe and holding moral relations with human life," then civilization is unintelligible without it. Much of the world's literature and art, and the loftiest achievements of men, are, with

the religious element withdrawn, and without the motive of religion to explain them, as barren as the desert of Sahara. This proposition hardly needs argument. "The religiosity of man is a part of his psychical being. In the nature and laws of the human mind, in its intellect, sympathies, emotions, and passions, lie the well-springs of all religions, modern or ancient, Christian or heathen. To these we must refer, by these we must explain, whatever errors, falsehood, bigotry, or cruelty have stained man's creeds or cults; to them we must credit whatever truth, beauty, piety, and love have glorified and hallowed his long search for the perfect and the eternal. . . .

"The fact is that there has not been a single tribe, no matter how rude, known in history or visited by travellers, which has been shown to be destitute of religion under some form."[1]

Moral and civic instruction no substitute for religious teaching

But it is also urged that a satisfactory substitute for religious training is to be found in moral and civic instruction. This view is widely held in France and has led to some rather absurd consequences. So scholarly a writer as Mr. Thomas Davidson has just now

[1] Brinton, *Religions of Primitive Peoples* (New York, 1897), p. 30.

urged this view upon us Americans.[1] He is able to do so, however, only by completely identifying religion and philosophy—and (as I think) a bad philosophy at that—in his definition of religion. But, in fact, the field of moral and civic instruction is quite distinct from man's religious life; it belongs to the institutional aspect of civilization. The moral aspect of life has long since come to be closely related to the religious aspect, but nevertheless the two are quite different. A religion, indeed, may be quite immoral in its influences and tendencies. It may lead to cruelty and sensuality, and yet be a religion. There have been not a few such. To confuse religion with ethics is to obscure both. Religion must be apprehended as something distinct and peculiar if it is to be apprehended at all. Matthew Arnold was absolutely wrong when he wrote: "Religion is ethics heightened, enkindled, lit up by feeling; the passage from morality to religion is made when to morality is applied emotion." It is still easier to make clear and enforce the distinction between morality and religion, if we substitute for the general term religion the highest type of all religions, Chris-

[1] "American Democracy as a Religion," *International Journal of Ethics*, October, 1899.

tianity. It is Christianity, of course, which we have in mind when speaking of religion.

My argument thus far has aimed to make it clear that religious training is an integral part of education, that in this country the State school does not and cannot include religious training in its programme, that it must therefore be provided by other agencies and on as high a plane of efficiency as is reached by instruction in other subjects, and that moral and civic training is no possible substitute for religious teaching. The agencies at hand for religious teaching are the family and the church, and, in particular, the special school, the Sunday-school, maintained by the church for the purposes of religious training.

Opportunity of the Sunday-school

The Sunday-school is in this way brought into a position of great responsibility and importance, for it is, in fact, a necessary part of the whole educational machinery of our time. It must, therefore, be made fully conscious of the principles on which its work rests and of the methods best suited to the attainment of its ends.

The Sunday-school must, first of all, understand fully the organization, aims, and methods of the public schools; for it is their ally. It must take into consideration the progress of

the instruction there given in secular subjects, and must correlate its own religious instruction with this. It must study the facts of child life and development, and it must base its methods upon the actual needs and capacities of childhood. It must organize its work economically and scientifically, and it must demand of its teachers special and continuous preparation for their work. It must realize that it is first and above all an educational institution and not a proselytizing one, and that the inherent force of the truth which it teaches is far greater than any attempted bending of that truth to special ends. It must cease to be merely a part of the missionary work of the parish, and become a real factor in the educational work of the community. It must give more time to its work, and the traditional division of time on Sunday will have to be gradually readjusted in order to make a serious Sunday-school session possible. A Saturday session may also be planned for. It must recognize that ordinarily no single parish or congregation can make proper provision for the religious training of all the young people under its care. The very largest parishes and congregations may be able to maintain a fully equipped Sunday-school for children from five

to eighteen, but the smaller parishes and congregations in towns and cities must learn to combine for their common good. Each parish or congregation may readily and ought always to maintain a Sunday-school of elementary grade, but several adjoining parishes or congregations must combine in order to organize and support a proper course of religious instruction for children of secondary-school age and beyond, say from thirteen to eighteen years. In a whole city, unless it be New York or Chicago or Philadelphia, one, or at most two, training-classes for Sunday-school teachers should be sufficient. Furthermore, Sunday-school teachers, like all other teachers, should be paid. They should be selected because of competence and special training; they should be led to look upon their work not as philanthropy, not even as missionary work, but as something which is larger than either because it includes both, namely education. The several Christian bodies, as long as they remain distinct, will naturally maintain their own separate Sunday-school systems; but within any given branch of the Christian church, be it Protestant Episcopal, Presbyterian, Methodist, or other, all of the principles just stated can be applied. Sunday-schools so organized could be given

the same systematic professional supervision that is provided for the secular schools. Each body of Christians in a given community could have its own Sunday-school board and its own Sunday-school superintendent and staff of assistants. Between some Christian bodies actual co-operation in Sunday-school instruction ought to be possible. For the proper organization and conduct of this religious instruction there must be a parish or congregational appropriation, or, better far, an endowment fund, to bear the legitimate cost of religious teaching and its systematic professional supervision.

The Sunday-school course of study must be looked after. It is at present—I say it with all respect—too exclusively pious. Religion is much more important in civilization and in life than the Sunday-school now teaches. It is more real. It touches other interests at more points. The course of study of the future must reveal these facts and illustrate them. It must be carefully graded and adjusted to the capacity of the child. It must reach out beyond the Bible and the catechism. It must make use of biography, of history, of geography, of literature and of art, to give both breadth and depth and vitality to the truths it teaches and enforces. It must comprehend

The appeal to the human heart

by informing the intellect and by fashioning the will. Knowledge and conduct react on the feelings, and the feelings, the heart (so to speak), are educated and refined through them. This fact will never be lost sight of by any competent religious teacher, and his purpose will never be to amass in his pupils knowledge about religion alone, but to use such knowledge to direct, elevate, and refine the religious feelings and to guide and form conduct into character.

It is along such lines as these that the development of the Sunday-school, from a phase of parish mission work into an educational institution of co-ordinate rank with the secularized school, must take place. There are numerous local problems to be solved, no doubt, and not a few practical difficulties to be overcome, but if the ideal be once firmly grasped and the purpose to reach it be formed, the result cannot be doubtful.

XI

THE SCOPE AND FUNCTION OF SECONDARY EDUCATION

An address before the University High School Conference
at Champaign, Illinois, May 19, 1898

THE SCOPE AND FUNCTION OF SECONDARY EDUCATION

The past decade has witnessed marked activity in matters pertaining to secondary education; that most ancient division of the educational system has been subjected to close study and to vigorous discussion. Passing by other and equally significant evidences of this—particularly in the Scandinavian countries—I cite simply the three elaborate reports made in Germany in 1890 by the Berlin School Conference, in the United States in 1894 by the Committee of Ten appointed by the National Educational Association, and in England in 1895 by the Royal Commission on Secondary Education. In a sense these three documents are epoch-making; they are in part a cause and in part an effect of the wide-spread opinion that secondary education is in need of reformation and reorganization.

Fortunately, secondary education no longer needs defense. Occasionally a lonely voice echoes the charge of Jack Cade—"Thou hast most traitorously corrupted the youth of the

realm in erecting a grammar school. . . . Thou hast men about thee that usually talk of a noun or a verb, and such abominable words as no Christian ear can endure to hear"; or, at intervals, perhaps some cultivated cynic snarls after the fashion of the Tory governor of the colony of Virginia, who wrote home to England, "I thank God there are no free schools or printing, and I hope we shall not have them these hundred years": but these are only the humors of progress.

Extent of secondary education

At the close of the academic year 1895–6, it was estimated by the commissioner of education that 600,000 pupils were receiving secondary instruction in the United States. Nearly two-thirds of these were enrolled in the 5,000 public high schools. Considerably more than one-half of the total number of pupils were girls. The number of secondary students to each 1,000 of population was 7.92. Every State and Territory now has public high schools, ranging from the 558 in Ohio, through 343 in New York, 329 in Iowa, 319 in Illinois, 219 in Massachusetts, and 166 in Texas to the 2 in Utah. It is obvious, therefore, that every section of the country and all classes of people are vitally interested in the efficiency and adequacy of secondary training. There is still another

fact of great importance to be referred to in this connection. During the last few years the development in this country of secondary education at the public expense has been little short of marvellous. From 1890–6, while the number of students in private secondary schools increased 12 per cent, or from 95,000 to 107,000, the number of students in public secondary schools increased 87 per cent, or from 203,000 to 380,000. Nor is this all: since 1893–4 the number of students in private secondary schools has been steadily decreasing. These facts are an eloquent witness to the growth of the spirit of democracy in education and they are a conclusive answer to those curiously inept critics who insist that it is un-American to provide other than elementary education at public expense.

Such being, in general, the present status of what we know as secondary education, I wish to discuss first its scope or limits, and second its function or purposes.

What is secondary education?

What is secondary education? The definition makers gravely walk about in a circle when they define secondary as that which succeeds elementary and precedes higher education, higher education as that which succeeds secondary education, and elementary education

as that which precedes it. One is reminded by this process of the Indian referred to by Locke who, saying that the world was supported by a great elephant, was asked what the elephant rested on; to which his answer was—a great tortoise. But being again pressed to know what gave support to the broad-backed tortoise, replied, something he knew not what. Evidently we need a basis more substantial than anything that the Indian or the definition makers have to offer. My own preference is to look for the base-line from which to measure and lay out the educational course, in the nature of the child-mind and in the character of the studies pursued, rather than in any merely formal and external scheme of administrative classification. The Royal Commission on Secondary Education, after a long and exceptionally intelligent discussion of this question, conclude that secondary education is "the education of the boy or girl not simply as a human being who needs to be instructed in the mere rudiments of knowledge, but it is a process of intellectual training and personal discipline conducted with special regard to the profession or trade to be followed."[1] In other words, elementary or general education is, in Plato's

[1] *Report* (London, 1895), I : 136.

phrase, ἐπὶ παιδείᾳ, for culture, while secondary or more special training is ἐπὶ τεχνῇ, for an art or trade. To reach this conclusion the learned commission have been obliged to give to the word art or trade a very unusual scope. It is held to include the interpretation of a literature or a science, the making of a picture or a book, the practise of a plastic or a manual art, the convincing of a jury or the persuading of a senate, the translating or the annotating of an author, the dyeing of wool, the weaving of cloth, the designing or the constructing of a machine, the navigating of a ship or the commanding of an army.[1] I am able to see in this definition and description only an elaborate begging of the question.

The very name secondary implies that it has reference to a primary or elementary education that comes before it. This elementary education I define as that general training in the elements of knowledge that is suitable for a pupil from the age of six or seven to the period of adolescence. It is ordinarily organized in eight or nine grades, each occupying an academic year. Nine grades are too many and are distinctly wasteful. To spend so much time on these simple studies leads to that arrested

[1] *Report* (London, 1895), I : 136.

development which is so often the bane of the elementary-school period. I have never known a child who needed more than six years' time in which to complete the elementary course, and I have known but few who have, as an actual fact, ever taken longer than that. An eight-year course is certainly ample for any community, and children should be given every encouragement and every opportunity to cover the elementary studies in even less time.

The secondary-school programme of study

The plan of studies in the elementary school is pretty much the same the world over. It is most clearly and concisely stated in the French decree of January 18, 1887, which defines elementary education as made up of the elements of morals and of civics; reading and writing; the study of the French language; arithmetic, including the metric system; history and geography, particularly those of France; object-lessons and the elements of science; the elements of drawing, singing, and manual training; gymnastics and military exercises. In the nature of the case all this instruction will deal with elementary and simple notions only, and, psychologically speaking, it will lay much emphasis upon sense-perception and the imitative instinct. The nature of the child-mind requires that. Yet it is the gravest of errors

in early teaching to suppose that sense-perception is itself incapable of analysis and that no thought-process is involved in it. Kant long ago said that all knowledge is judgment, and Doctor Harris has clearly shown the nature of the judgment that is implied in the activities of sense.[1]

It must not be supposed, therefore, that between the mental activities of the child in the elementary school and those of his fellow in the secondary school there is a great gulf fixed. Quite the contrary: the two sets of activities are alike in kind, and differ only in quality and in the explicitness of the processes involved. What is hidden beneath the surface in the mind of the child from six to twelve comes more and more fully into consciousness in the child from twelve to sixteen. There will, therefore, be an easy and gradual progression from the earlier stage to the later one, and it is a hopeless and unjustifiable undertaking to attempt, as is sometimes done, to draw a hard-and-fast line between them.

Characteristics of adolescence

The marked characteristics of the pupil of secondary-school age are due to the fact that, as Rousseau puts it, we are born twice; the first time into existence, the second time into

[1] *Psychologic Foundations of Education* (New York, 1898), chaps. IX, X.

life; the first time as a member of the race, the second time as a member of the sex—in other words, they are due to the phenomena of adolescence. The physical and mental effects of this epoch in human life begin earlier and last longer than is sometimes supposed. They dominate the entire secondary-school period. Rapid growth and increase of nervous and mental energy mark these years. Emotions, vague and disordered, displace the placidity of earlier life. Ambitions, yearnings, desires are formulated crudely and for the first time. Introspection begins and a morbid self-consciousness is not infrequent. The future, hitherto almost unthought of, becomes of great interest and importance, and overshadows the present. Abnormally intense religious experiences and reflections are common. The old and familiar tasks, occupations, and games no longer suffice; the soul seems to overflow, as it were, and demands new and more difficult problems to occupy it and to absorb its activities. The higher thought-processes, until now latent, exhibit themselves in a variety of ways, and more formal and elaborate chains of inference supersede the reasoning from one particular instance to another that is so characteristic of the little child.

Characteristics of secondary-school studies

These facts point directly to the essential characteristics of secondary-school studies. They must, in the first place, be comparative and reflective in character in order to provide food for the newly discovered intellectual capacities; in the second place, they must be and continue to become more and more difficult, in order to occupy and develop the augmented nervous and mental energy that now presents itself; and in the third place, the tendency to introspection and analysis must be satisfied by the disclosing of the inner connections and deeper reasons of the subjects taught. When these three conditions are fulfilled then, and only then, is secondary education being carried on upon a proper and a scientific basis. No amount of rearranging or reviewing elementary studies will make a secondary-school course. The characteristics to which I have just referred must be present in order that a secondary-school course may be worthy of the name.

A foreign language, ancient or modern, no matter at what age it is begun, is a secondary study because it invites and compels comparison with the mother tongue and a more or less reflective analysis of the two vocabularies and the two sets of grammatical and syntactical forms. Algebra is a secondary study because

of the symbolic and general character of its operations, and the rapidly increasing difficulty of its processes. Formal grammar is a secondary study because of its dependence on the laws of logical thought and because of its abstract and analytic character. History, geography, and natural science tend to pass rapidly into the secondary form, no matter how simply and objectively they may be begun.

Passage from elementary to secondary instruction

From this it will be apparent that it is my opinion that secondary studies make their appearance, and ought to make their appearance, in the upper grades of the elementary schools. The law of educational continuity demands this, and there is no other way to escape from the dreaded arrested development which falls like a pall upon so many of our school children. As power is gained only by exercise, schoolmasters are beginning to find out that the quickest and surest way to lead pupils to the mastery of a given task is, after trying it a few times, not to review it indefinitely but to go forward to something more difficult. Good teaching will always keep a pupil's mind taut; to let it grow slack increases the friction and the waste.

Just as secondary studies take their rise almost unnoticed among and out of the ele-

mentary studies, so they pass insensibly into those of college grade. The college point of view is more elevated, its scope broader, its methods still more reflective and abstract than those of the secondary school; but no one can say dogmatically just where the one ends and the other begins. Custom and convenience play a large part in these matters. The order of studies is arranged with reference to many different considerations. The elements of Arabic and of Sanskrit are perhaps easier than the elements of Greek; yet no one would propose to begin either Arabic or Sanskrit in the secondary school. Their historical relation to our civilization, the character of their content, and their relative importance all cause the postponement of the study of these languages to the college or to the university. It is apparent that not the relative difficulty of studies, but their relations to each other, to the developing powers of the pupil, and to contemporary civilization determine their order during the secondary and college periods.

The secondary-school period, then, is essentially the period of adolescence, of what may be called active adolescence as distinguished from the later and less violent manifestations of physical and mental change that

are now usually included under the term. The normal years are, with us, from twelve to sixteen, or from thirteen to seventeen. The normal boy or girl who is going to college ought to enter at seventeen, at the latest. A limitation of the secondary-school course to four years has been brought about chiefly by social and economic causes, but it can also be justified in a measure on physiological and on psychological grounds.

The scope of secondary education includes the four years that I term those of active adolescence, from twelve or thirteen to sixteen or seventeen. Secondary-school studies must have the characteristics that I have enumerated, and for the reasons that I have stated. They are not sharply separated from elementary studies on the one hand or from college studies on the other. They grow easily and naturally out of the former and pass easily and gradually into the latter.

Disciplinary and selective functions of secondary instruction

The functions of secondary education depend largely upon our conception of its scope and upon conditions incidental thereto. These functions I class under two heads: (1) disciplinary, (2) selective. The scientifically adjusted secondary-school course should be made up of secondary studies arranged with reference

to these two ends of discipline and selection, and with reference to these two ends alone. The secondary school, to succeed in its self-imposed task, must be, to borrow some technical terms from Kant, autonomous and not heteronomous. It cannot give its pupils the best possible secondary education, and at the same time have its efficiency judged by its ability to fit some or all of its graduates to pass the tests prescribed in a thousand forms for college entrance. My mind is perfectly clear that the relationship usually existing hitherto between secondary school and college must be reversed; instead of the secondary-school programme having to conform to college-entrance requirements, college-entrance requirements must be brought into harmony with secondary-school programmes. Only an insignificant percentage of secondary-school pupils go forward to a higher institution of learning. It is important for our civilization and for our culture that this percentage should be largely increased. In order to accomplish this, and at the same time to strengthen the position of secondary education "it is necessary"—I quote the authoritative words of the Committee of Ten—"that the colleges and scientific schools of the country should accept for admission to

appropriate courses of their instruction the attainments of any youth who has passed creditably through a good secondary-school course, no matter to what group of subjects he may have mainly devoted himself in the secondary school."[1]

Passage from secondary school to college

This position is so reasonable, and so obviously in the interest both of the college and of the secondary school, that it is a legitimate cause for surprise that it was not taken long ago by all colleges and scientific schools. That this has not happened is due in part to the lack of educational statesmanship on the part of those concerned with the formulation of college policy, and in part to the distressingly bad organization of much secondary-school work. In many parts of the country secondary-school work has been so poor, so scattering, and so lacking in purpose, that colleges have been unable to accept it as an adequate preparation for higher studies, even when they were so disposed. Conditions are rapidly improving in this respect, but they are still far from satisfactory. The chief difficulty with secondary-school courses is that they include too many subjects pursued for too short a time. The

[1] *Report of the Committee of Ten on Secondary-School Studies* (New York, 1894), p. 52.

horrible spectre of "Fourteen Weeks," in this, that, or the other subject still haunts many schools, and an unintelligent ambition or a foolish local vanity contemplates it with ill-concealed satisfaction. When the Committee of Ten made their investigation they found that the programmes of forty unusually good secondary schools contained this appalling list of subjects:

Overcrowded school programmes

Languages: English, French, German, Spanish, Latin, Greek—6; mathematics: arithmetic, algebra, geometry, trigonometry, analytic geometry, descriptive geometry—6; natural science: mechanics, physics, chemistry, astronomy, geography, natural history—6; and also rhetoric, drawing, surveying, music, physical training, elocution, psychology, ethics, history, civil government, constitutional law, commercial law, political economy, stenography and typewriting, bookkeeping, penmanship, sacred studies—17, or 35 subjects in all. The mere reading of these names must suggest to many of us programmes that we have seen in which the attempt has been made to provide for two-thirds or three-fourths of the entire list. The dissipation of energy and the shattering of the highly coveted power of concentration that must follow any attempt to keep

track of such an educational kaleidoscope can better be imagined than described.

It is essential that studies should be organized in courses, and these courses may be as numerous and as diverse as the school can afford or as the community demands. These courses should not be rigid and compulsory: that involves another and hardly less serious danger. They should be flexible and elective, made by each pupil for himself with the aid of his parents and teachers. Each course should admit of attention to not more than five subjects at once, and each subject should be pursued long enough to gain such mastery of it as will cause it to yield to the student some considerable part of its educational value. My own preference is to have each subject followed for an entire academic year, at least. Think how little one knows of a foreign language, of any department of history, or of a natural science, after even a full year of study.

Purpose of flexible and elective courses

These flexible and elective courses—the varieties of which would be very numerous to meet the diverse needs, tastes, and capacities of the students—must, of course, be organized about a common centre or core. After weighing carefully the alternative propositions, I have come to the conclusion that this centre or core should

be threefold, in order to combine genuine and well-proportioned discipline with abundant opportunity to meet individual needs. The three constituent elements of this centre or core, I state in this way: (1) the study of language; (2) the study of deductive reasoning, in mathematics and formal logic; (3) the study of inductive method, in experimental science, in vocational preparation, and, in part, in history. If it be provided that the course pursued by every student must contain a subject selected from each of these three classes, we may safely trust to the student's tastes, needs, and ambitions, together with the advice of his parents and teachers, both to select the specified subjects and to add to them others that lie outside those classes. He cannot very well fail to make a satisfactory course. This arrangement suits equally well the student who has a college course in view, or his fellow who looks forward to a scientific school, an agricultural college, a technical institute, a business career, or indeed any other form of occupation. Each student will thus be given a chance to make the best use of his adolescent powers during the secondary-school period, and, under the limitations that I have suggested, he will be able, at the end of four years, to present to a

higher institution of learning a certificate of graduation that it cannot, and, I am convinced, will not refuse to accept.

It is in this elimination of elementary studies from the secondary school, and in the frank recognition of the paramount advantages of the elective system, that I see the way of highest usefulness opening before the secondary school. Instead of conducing to arrested development, it will then constantly spur the pupil on by putting new difficulties before him. Instead of dividing his attention and interest among eight, ten, or even twelve subjects each year, so frittering away his time and energy, it will focus them upon not more than five subjects, and pursue each far enough and long enough to gain real insight into it and genuine power over it. Instead of offering one or two rigid courses to a hundred students, no two of whom are just alike, it will make it possible (within the necessary limitations of the school's resources) for every pupil to have the course he most needs and yet one that has balance, harmony, and undisputed effectiveness. The disciplinary purpose of the secondary school will thus be gained.

Its selective purpose is of almost equal importance. From what I have already said of

the mental characteristics of children of secondary-school age, it is evident that at that time new tastes and unsuspected powers make their appearance. The wise and observant teacher will seize upon these, and by bringing the pupil in contact with the best means for their development will promote the discovery whether they are superficial or deep, fleeting or permanent; he will then guide the pupil's studies accordingly. The result of this attitude is to assist materially a process of educational selection by which pupils are trained for efficiency while gaining a sound secondary education as well. For it is not enough that our education should give pupils a knowledge of the civilization which surrounds them; it must also fit them to take hold of that civilization at some definite point and so to support themselves in it. That is, it must add efficiency to knowledge; and efficiency, in these days of highly organized and minutely differentiated societies, implies a great deal. No generation of pupils can be made efficient by any uniform course of study. Such a course will produce efficiency in those to whom it is best adapted; the others must go to the wall. A uniform course of secondary and collegiate study would, as higher education became general, result in

bread riots of the learned. It is the uniform course of gymnasial study in Germany, lasting through three generations, which that country has to thank to-day for what Bismarck himself has called the educated proletariat.

It would be futile to attempt to make the American secondary school an exact copy of any type of foreign school, however successful that type may have been. There are abundant reasons for adhering in our educational aims to ideals that are the outgrowth of our own national conditions, and that are suited to them. The programme of studies of a German gymnasium, of a French lycée, or of an English public school, such as Eton or Rugby, we would not duplicate for our pupils even if we could. They would not bear transplantation; they would be an exotic in our system. But it is the high order of efficiency in their teachers, rather than the nature and scope of their programmes of study, that imparts distinction to them, and toward the obtaining of this high quality of secondary-school teacher that efforts must be directed in the United States. Professional ability and exactness in scholarly information cannot be dispensed with. Consummate knowledge and skill on the part of the teacher are the backbone of

any and every successful system of secondary education.

Mr. Herbert Spencer has told us that mankind, like a group of men selected at haphazard, is made up of a few clever individuals, many ordinary ones, and some decidedly stupid. The secondary school must recognize this fact, and not make the common mistake of trying to deal with a supposititious "average pupil": there is no average pupil. It is one of the most popular blunders of our contemporary thinking and writing to suppose that individuality can be disposed of by treating it in mass. We speak glibly of "man," of "the industrious," "the debtor class," "the intelligent," and so on, and imagine that the individuals included in the generalization have been satisfactorily disposed of and sharply marked off from all others. This is quite untrue. Human individuality and human capacity are not to be disposed of so lightly. These shorthand registrations of them and references to them are apt to be very misleading, and nowhere more so than in education. To treat individual pupils in this fashion is to ignore the selective function of secondary education, and to prevent its operation. During the secondary-school period, I repeat, tastes are to be developed into capaci-

ties and each pupil started on that line of interest and activity that is best adapted to him. This is the element of truth that underlies the definition of secondary education, already quoted, given by the Royal Commission. Throughout the whole period of secondary instruction and accompanying the study of any subject whatsoever, the pupil should be taught four things: to observe, to record, to compare, and to express. Constant and rigorous training in these four acts will not only do all that the secondary school can do to fit its pupils for life, but it will give them the best possible preparation for any higher course of study which they may elect to pursue.

A secondary education that is both disciplinary and selective is of unusual importance in this country on both social and political grounds. Democracy needs intelligent and trained leadership—leadership in public policy, leadership in industry, in commerce, in finance, leadership in art and in letters. The basis of training for leadership is laid in the secondary schools, where the directive capacity of the nation is serving its apprenticeship. There the majority of the men and women who are to guide the destinies of the next generation are putting forth their powers and testing their

strength; out of a variety of intellectual interests, nature and environment lead them to make a selection. Training—persistent, thorough, broad—in the field chosen, is the surest guarantee, if one can be given, of future success and of future usefulness.

XII

THE SECONDARY SCHOOL PROGRAMME

An address before the Schoolmasters' Association of New York and vicinity, March 8, 1890

THE SECONDARY SCHOOL PROGRAMME

Matthew Arnold has reminded us that the secondary school is the most ancient of existing educational institutions. It antedates the university by several centuries; and by its side the primary or elementary school, springing as it does from needs and ideas that are comparatively modern, seems but a creature of yesterday. Moreover, the history of the secondary school is unbroken and easily traceable. The monastery schools and the famous establishments at St. Gall, Reichenau, and Fulda are the direct ancestors of our Etons and Rugbys, of our contemporary lycées, gymnasia, and academies.

Threefold division of instruction

In the United States the educational organization is so indefinite and unformed, and the educational terminology in common use so unsystematic, that certain explanations are necessary before any discussion of the province and scope of the secondary school may be undertaken. The threefold division of instruction

into primary or elementary, secondary, and superior, has been accepted by the Bureau of Education at Washington, and is in accord with the practise on the Continent of Europe. By superior instruction is meant that given in institutions empowered by law to confer degrees. This may be either general or special, and includes in this country the colleges and universities as well as the professional schools of law, medicine, theology, education, agriculture, pharmacy, engineering, and the like. The implication is, though unfortunately not always the fact, that these institutions for superior instruction have required of applicants for admission the possession of an approved secondary education. By primary or elementary instruction is meant such as the state is justified in requiring of all children for its own safety and perpetuity. In the present state of educational science this may safely be held to include a knowledge of reading and writing, and some instruction in elementary arithmetic, geography, history, natural science, and manual training. This elementary education should begin not later than the sixth year of life, and with the average child seven years may be devoted to it, although specially intelligent or studious children may be permitted, as in

France, to complete the prescribed studies in less time.

Field of secondary instruction

It would seem natural, then, that the field of secondary instruction should be that which lies between the elementary and the superior schools. But this is not quite true. There is and can be no sharp line of division between the various grades of instruction. They pass gradually, even insensibly, into each other. In order to prevent the pupil's development from being arrested and his capacity for education from being brought to an end, he must constantly be led on to new heights. For this reason certain studies, usually classed as belonging to secondary education, such as algebra and a foreign language, are very appropriately taught in the upper grades of the elementary school. A beginning in the field of secondary studies is therefore made before the limits of the elementary school are reached, and by the time that the pupil is twelve, eleven, or even ten years of age. This is actually the case with the French lycée and the Prussian gymnasium.

At the upper end of the secondary school course a similar condition is found. There is no reason why many secondary schools, particularly public high schools, over 60 per cent of whose graduates do not go on to a higher edu-

cational institution, should not give instruction in subjects such as logic, political economy, and trigonometry, which are contained in every college course. Unless this policy is adopted, the vast majority of American boys and girls will be deprived of all opportunity to come in contact with these studies and others like them.

Effect of college-admission examinations

In the past the secondary school in this country has been very often dwarfed in importance and deprived of its proper spontaneity and individuality, because it has permitted itself to settle down to the routine task of preparing pupils for entrance examination to college, fixed and conducted by the college authorities. Whatever that entrance examination demanded, and in some cases just a trifle more, has been taught; whatever such examination did not call for, no matter how important or valuable it might be for a boy's education, has not been taught. The secondary school has been too largely dominated by the college; and in few cases has that domination been other than unfortunate. As notable instances of the contrary effect may be mentioned the stimulating influence of the more recent regulations regarding entrance examinations adopted by Harvard College, particularly in geometry and in physics, and the novel

unity and thoroughness imparted to the instruction in English in the secondary schools by the action of the colleges in uniting with the schools in deciding upon a uniform scheme of requirements for entrance in that subject.

It is neither proper nor dignified for the secondary schools to continue in this condition of dependence upon college-entrance examinations. They should be independent and self-centred. By a careful study of the history and principles of education, coupled with the teachings of their own large experience, they should seek to devise that course of study and those methods of instruction that are best suited to the mental, moral, and physical development and culture of the boys and girls committed to their care. Nor need it be feared that in so doing they will interfere in any way with the preparation of their pupils for college work. For in education it is profoundly true that that which is intrinsically the best in any particular stage of development, is also the best preparation for that which comes after.

Waste in education

If the American boy is to obtain his baccalaureate degree at the age of twenty or twenty-one (which is considerably more than a year later than the French boys leave the lycée, and the Prussian boys the gymnasium), he must be

ready to enter college not later than seventeen; and this can be managed while actually providing for the secondary school a more comprehensive curriculum than at present obtains. Before discussing in detail the composition of such a curriculum, one or two preliminary considerations must be mentioned. They may, however, be dismissed very briefly, since they have so recently been treated with the highest authority by President Eliot.[1] The first of these has to do with the length of the school day and that of the vacations. The former should never be less than five full hours of study and school discipline; the tendency to shorten it any further is irrational and should be checked. A programme arranged on sound educational principles can occupy five hours a day easily enough without in any way impairing the pupil's health or lessening his interest, unless the teacher is peculiarly lacking in mental equipment and professional qualifications. The vacations are now unduly long, and seem to be yielding to a certain strong social pressure to make them even longer. The old-fashioned summer vacation of four or six weeks has long since become one of ten or

[1] "Can School Programmes be Shortened and Enriched?" *Atlantic Monthly*, August, 1888, pp. 250–8.

twelve, and in our city schools a summer vacation of fifteen or even sixteen weeks is by no means a curiosity. It is the teacher who needs this vacation more than the pupil. But even from his standpoint the present practise has gone beyond reasonable bounds. The German method of giving three weeks at Easter, one at Pfingsten, six in midsummer, one at Michaelmas, and two at Christmas seems wiser than ours, for it makes a more frequent alternation between work and play. Perhaps sixteen weeks—including the recesses at Christmas and Easter and a long summer vacation, as better suited to our climate and habits of life than the German plan—might be agreed upon as the maximum period in which school duties may wisely be suspended each year.

Need of better-trained secondary teachers

But in addition to the school year of thirty-six weeks and twenty-five hours in each week, the secondary schools are sadly in need of better-trained teachers. It is remarkable how entirely the teachers in these schools have remained uninfluenced by the great interest in the science and art of teaching which has of late years manifested itself both in this country and in Europe. Secure in their possession of a considerable amount of knowledge and of more or less culture, the secondary school

teachers have not seemed to understand the significance or the value of a professional preparation. As a result their work has been done in a routine, imitative way, and their pupils have suffered. Most of the criticisms that may now be legitimately made upon the work of the secondary schools would be disarmed if the teachers in these schools were abreast of the present development of their art. One important reason why the secondary schools have not felt this full measure of progress in methods of teaching that is so marked in the elementary schools, is that secondary teachers are usually college graduates, and the colleges have, until very recently, done so little to show that they are aware of what is being accomplished in the study of education. Consequently they have failed to contribute their proper proportion of duly qualified teachers. Until the colleges assume their full responsibility in this matter and endeavor to discharge it, the work of the secondary school, speaking broadly, will not be as well done as it might be.

Aim of secondary instruction

Assuming that more competent teachers are at hand, and that a school year of thirty-six weeks of twenty-five hours each is agreed upon, what should be the aim of the instruction in the secondary school, and with what curriculum

should it endeavor to accomplish it? It should be the aim of the secondary school, I take it, by instruction and discipline to lay the foundation for that cultivation and inspiration that mark the truly educated man. In endeavoring to attain this ideal, the secondary school must not lose sight of the fact that it is educating boys who are to assume the duties and responsibilities of citizenship, and who must, in all probability, pursue a specific calling for the purpose of gaining a livelihood. The fact that the secondary school has also a selective function to perform is often overlooked. Yet this is most important. Secondary school pupils are adolescents, and their tastes and capacities are rapidly forming and finding expression. To afford opportunity for these to develop, and to encourage them to develop along the best and most effective lines, is an obvious duty of the secondary school. Because they are not selective, many secondary courses of study are very ineffective.

Secondary school programme of study

To prepare a course of study which shall keep all these points in mind, and at the same time afford the developing intellect of the pupil that exercise of which it is capable, is not an easy task. Indeed, it presents some problems which but a little while ago seemed almost im-

possible of solution. But patience, wider experience, and a careful study of the surrounding conditions have lessened the difficulties. The chief of these is perhaps that created by the rapid development and present importance of scientific and technical schools. These institutions represent a real and significant movement in modern civilization. They have complicated the question of a curriculum for secondary schools by demanding a preparation quite different from that required for entrance to the average American college. That the problem thus raised belongs to the field of secondary education in general and is not due to conditions prevailing in any one country alone, is shown by the fact that England, Germany, and France have all been brought face to face with it as we have been. In each of these countries much progress toward its solution has been made. In England the so-called "modern side" has been added to the traditional classical course. In France the lycée has its *cours spécial* in which mathematics and the sciences replace Latin and Greek. In Germany the well-established real-gymnasium and real-schule are every year justifying their right to exist on an equal plane with the gymnasium itself. A specially interesting move-

ment in this connection is one in Germany which has for some time past been calling for the establishment of an *Einheitsschule*, in which the main features both of gymnasium and real-schule are to be combined.

The appropriate course of study for the typical American secondary school is one in which eight elements should always be represented: namely, the mother tongue, geography and history, natural science, mathematics, Latin and Greek, French and German, drawing and constructive work (manual training), and physical training. It combines some features of the English "modern side" with some of those of the French *cours spécial*, and is not unlike what German students of education have in mind under the name of *Einheitsschule*. It involves beginning the study of one foreign language at ten or eleven years of age, and the elements of algebra and of plane geometry shortly afterward. Ample choice would be permitted to students, provided only that not more than five so-called "book" subjects were carried on at once, that no two new languages were begun at the same time, and that English, geography and history, and natural science were always represented. Pupils of a different temperament, of different points of view, and with

different purposes in life would be guided to express and to satisfy themselves to the fullest extent possible. The ability to read intelligently, to write legibly, and to perform understandingly and correctly with integers the four fundamental operations of arithmetic, must be insisted upon at ten years of age.

The growing practise of postponing even this modicum of knowledge until after the tenth year is to be emphatically discouraged. Attention has recently been called to the fact that one of the best-known academies in the United States requires for admission only some knowledge of common-school arithmetic, writing, spelling, and the elements of English grammar, and that the average age of pupils on entering is sixteen and one-half years. At this age the French boy is reading Cicero, Virgil, and Horace, Sophocles and Plato, Shakspere and Tennyson, as well as studying general history, solid geometry, and chemistry. His German contemporary is similarly advanced. It is very evident that at this point there is a tremendous waste in our educational system. It must be remedied and remedied speedily, if our higher education is not to be discredited altogether.

What is included under each of the topics

of study above enumerated may be briefly outlined.

1. *English*—The study of the mother tongue must not be neglected by any class of students. But it must be far better taught than now and with a different aim. That the instruction in English, both in school and college, has been sadly neglected and little developed in the past will not be denied. Perhaps no one but the college professor who requires original written work from his pupils knows how insufficient and inefficient the English teaching in the secondary school is. A very large proportion of those students who reach the baccalaureate degree do not possess the ability to express with accuracy and conciseness, whether orally or in writing, even a simple train of thought. This woful neglect of the mother tongue has been largely due, as Paulsen points out is the case in Germany, to the great preponderance of classical instruction and the impression that this afforded all the linguistic training necessary. We have gradually emancipated ourselves from the tyranny of this notion; and now the long-neglected study of the mother tongue is beginning to receive proper recognition in schools of every grade. Our ideals for this study are no longer satisfied by

English

the plodding through a grammar and by the memorizing of a few rules and canons of rhetoric. Language study, and particularly that of a tongue so rich, so versatile, and so intrinsically interesting as our own, means far more than that.

The general aim of this instruction in the secondary school should be to impart a knowledge of the principal laws of structure and syntax, to develop ease, fluency, and correctness in speaking and writing, to point out the principal stages in the history of English literature, and to bring the pupil to an acquaintance with some of the great masterpieces of prose and verse. Wide but carefully chosen reading and frequent and systematic exercises in composition are the most efficient means of instruction. It should be remarked, however, that composition writing is valuable only if the pupil's work is carefully and intelligently corrected and criticised. Otherwise it is a positive evil, for it serves to exaggerate, and make habitual faults already present in the use of language. It is of the highest importance that the pupil should be accustomed to hear correct English spoken. Downright inaccuracy of speech should be considered sufficient reason for a teacher's removal. A boy will learn more evil in a week from a bad example than he will derive good

from a book in a month. Most language instruction should be oral and the pupil should from the very first take a large part in the exercises. As language is but the form and expression of thought, care should be taken to see that thought is always expressed by it. This cannot be the case if the pupil is forced ahead either too rapidly or in an unnatural course. The amount of time proposed for this branch of study is therefore comparatively large, and no class should be relieved of the necessity of writing dictation-exercises or compositions at least as often as once a week. When this is done and done properly in the secondary school, the college instruction in English may enter upon that which really belongs to it, and will no longer be compelled to devote itself, as now, almost wholly to what President Charles Kendall Adams once happily described as "the flagellation of bad English." Nor should it be forgotten that the secondary school must bear its share in teaching pupils how and what to read, in the best and deepest sense of that phrase. No English instruction is entirely successful unless it implants in every pupil a love of the masters of thought and style, and a desire to grow more and more familiar with them.

eography
nd history

2. *Geography and History*—These complementary studies, inseparable from each other and indispensable to a sound education, have also been sadly neglected in the secondary schools. We might truthfully say of the Americans, as Bréal said a few years ago of his fellow Frenchmen, that they are celebrated for their ignorance of geography. The subject has been so badly taught that it might almost as well have been passed over altogether. We are now beginning to follow the example set us by Germany in teaching geography, and perhaps in a few years it will be adequately presented in the schools. Geography has two distinct aims. It seeks to point out and describe the character, the divisions, the climate, and the configuration of the surface of the globe that we inhabit, and also to trace the modifications which man himself has made and the artificial divisions that he has marked off upon it. When dealing with the former questions geography is physical; when considering the latter it is political and commercial. It thus occupies a position between the natural and the historical sciences and connects the two.

When geography is properly taught, the child is first led to observe his immediate surroundings. The points of the compass, relative

situations and distances, the real significance of a map may all be taught and best taught with reference to the city, town, or village in which the particular school is situated. The schoolroom should be well supplied with globes, relief-maps, charts, and other illustrative material, in order that, when the pupil passes from the consideration of his immediate surroundings to that of localities at a distance, his understanding may receive the assistance of these symbolic representations. When political and commercial geography is undertaken, its close relation with history makes it both advisable and necessary to teach both subjects together. Perhaps no study that is pursued at this age brings to the pupil a richer store of facts or a greater intellectual stimulus than do these. Historical teaching proper will of course begin with the narration of the lives of great men, and the story of their achievements. About this as a nucleus may be grouped a considerable body of facts, and an account of the tendencies set in operation by leaders of thought and action. This mode of presentation familiarizes the pupil from the first with the human factor, the spiritual force, in history. The scope of the historical teaching in an American secondary school should include

an accurate knowledge of the main facts in the history of the United States and of England, as well as a general acquaintance with the progress of universal history. It will not omit the outlines of economic life, or fail to lead up to an acquaintance with modern economic and social problems.

Mathematics

3. *Mathematics*—Whether or not Sir William Hamilton was justified in his unfavorable judgment as to the value of mathematical study, it seems clear that our schools have devoted too much time to the subject. Under the guise of mathematics much has been taught that is not mathematics at all. Abstruse and very absurd problems and puzzles in logic are to be found in almost every mathematical textbook under the delusive heading of "Examples." These simply vex and discourage the student and arouse in him a distaste for what is really valuable and practical in mathematical study. They should be passed over entirely, as should also many of the complexities of commercial arithmetic, and all but three or four of the tables of weights and measures. The metric system must be taught as a matter of course. The elements of plane geometry should precede algebra for every reason known to sound educational theory. It is more fundamental, it is

more concrete, and it deals with things and their relations rather than with symbols. In the form of what the Germans call *Raumlehre*, many geometrical facts would be taught from the first, in the proposed curriculum, under the head of drawing and constructive work. When the formal proofs of geometry are later entered upon, they will therefore be seen to be easy and natural, rather than difficult and wholly strange. Good teaching in mathematics should enable the student who follows a classical course during the last three years in the secondary school to enter college with a good understanding of arithmetic, algebra, and geometry, both plane and solid. The student selecting a scientific course in the secondary school could add to this a knowledge of analytic geometry, of trigonometry, and perhaps of determinants as well.

Natural science

4. *Natural Science*—This is a term of wide and varying significance. As used here, it has two meanings. During the earlier years of the course, it is equivalent to the term *Naturbeschreibung* as used in German school programmes. Applied to the later years, it means the experimental study of chemistry and physics. In the lower grades it is not specifically physics or chemistry or geology or

botany or physiology or astronomy that is studied, but something of all these. The subject-matter is found in the facts of nature which surround the child on every hand, and which should be as familiar to him as the names he hears. This instruction aims to open the pupil's eyes, to teach him how and what to see, and to appreciate what the word nature means. It is the most fascinating of school studies; and it complements and runs into almost every other subject.

Latin and Greek

5. *Latin and Greek*—In the secondary schools of Europe, Latin still occupies the leading place. Greek is begun later than Latin, and when the Latin is well taught Greek needs less time and effort for the mastery of so much of it as is desirable during the period of secondary instruction. Inasmuch as both serve practically the same purpose in education, they may properly be spoken of under a single head.

It seems quite safe to predict that no culture will ever be considered broad and deep unless it rests upon an understanding and appreciation of the civilizations of Greece and Rome. Whether such culture is necessary or even important for the great body of the population, and whether the classics are properly taught or not, are very different questions from that

which is raised as to their educational value. It is only as respects one or the other of the former that recent criticism and attack have been in any degree successful. The classics have suffered from being forced upon those who cared nothing for them and would care nothing. They have also suffered, and very severely, through the waste of time they have involved. But both of these objections may be removed without weakening in any degree the position of the classics. To the charge of bad and wasteful methods of classical teaching, much of it done under the guise of thoroughness, the schools must plead guilty. They have been endeavoring to make philologists out of the material afforded by the average schoolboy. The greatest value of the classics is found in the ability to read and understand the great poets, philosophers, and historians who wrote for all time in the Greek and Latin tongues. The boasted discipline of classical study for the attention and reasoning powers may be quite as well obtained from studies which touch more closely the practical life of the great mass of the population. This argument is, therefore, not only unsound, but needless for the classicist to use, since he has at his command others that are stronger and more effective.

To know something of the spirit of Sophocles, Demosthenes, and Plato, of Cicero, Horace, and Tacitus, and to understand the civilizations and the points of view that they represent, are, from one point of view, almost enough to give the fortunate one a claim to culture. The wearisome grammatical drill and the tedious reiteration of details that are relatively of little value, save in so far as these are absolutely necessary to enable the pupil to read intelligently, are out of place in secondary education. The proper aim of classical instruction at this period is stated with great clearness and force in the comments on the course of study furnished by the Prussian minister of public instruction to the teachers in the most successful secondary school yet devised, the gymnasium. The minister says:

> So far as the end to be attained by a knowledge of language is concerned, it is hardly necessary to adduce arguments to justify the proposition that the acquisition of a vocabulary is of at least as much importance as familiarity with grammatical details. For it is just by means of this vocabulary that satisfaction is gained as facility in reading is acquired; by means of it, too, interest in reading extends beyond the period of school life. The aim of the gymnasium is not, however, attained when the pupils are able merely to read works of a certain degree of difficulty. Emphasis is much rather to be laid upon the

fact that they have read works of a certain scope and character, and upon the manner in which they have read them. As regards the method of reading, two points must be kept in mind; it must be based upon verbal accuracy and it must lead to an appreciation of the thought which is expressed and the form chosen for its expression. On the former consideration rests the disciplinary value of the classics; on the latter the basis of that which, when fully developed, is designated as classical culture. A treatment of this reading which neglects grammatical and lexical exactness, leads to superficiality; a treatment which makes the acquisition of grammatical and lexical exactness the main aim of reading, overlooks a fundamental reason for the teaching of Latin in the gymnasium. Special attention must be called to this latter error, for it endangers both the interest of the students in the study of the ancient languages and the reputation of the gymnasium among its most thoughtful supporters, by turning the teaching of the classics, even in the highest grades, into a mere repetition of grammatical rules and a memorizing of minute details as to synonyms and style.

This applies to the United States quite as well as to Prussia, and to the study of Greek as much as to that of Latin. When these directions are followed it will be easy enough to read considerably more of the classics than is now done in the secondary schools, and to do it in the time at the teacher's disposal. It may also be observed that the grammatical details of different languages, when alike, should be

studied once for all and not repeated for every new language taken up. Devices for carrying out this suggestion have been prepared under the form of parallel grammars, and are now used in a few schools both in this country and in Great Britain.

As a rule the classical teacher has not appreciated the changed educational conditions and the new demands made upon the schools. He has therefore provoked antagonism when he should have invited co-operation. He must recognize that while the secondary school cannot dispense with the classics, it can no longer be completely dominated by them. Yet he must insistently make it plain that the study of the literature and the life of Greece and Rome means to the modern European or American precisely what the study of embryology means to the biologist and the study of social origins to the economist and the political scientist.

French and German

6. *French and German*—These are indispensable in the secondary school. It was Goethe who said: "A man who knows only his own language does not know even that." One modern language should be begun early and studied continuously for several years. To some it may seem a matter of indifference whether French or German is first taken up.

But French seems to offer to the English-speaking student more difficulties of pronunciation and of idiom than German, and should therefore be begun before the pupil has acquired very fixed notions of grammatical and rhetorical canons. Moreover, the relation between French and Latin seems to furnish a good reason for making the two, to a certain extent, interdependent and illustrative, the one of the other. An ability to read French, to understand it when spoken, and in some measure to write it and to speak it having been attained, the mastery of a certain amount of German will involve fewer difficulties, and the boy may enter college or the scientific school with a good reading knowledge, and perhaps something more, of both of these indispensable keys to culture; or he may postpone the second modern language until the college period is entered upon. There are now reasons of practical importance and convenience why Spanish should be taught in American secondary schools, particularly in view of the rapidly developing relations—business, social, and political—with the other American republics.

Drawing and constructive work

7. *Drawing and Constructive Work*—To introduce this subject generally into the secondary schools of this country would be a new

departure. It is so, however, only because these schools have not been doing their duty by the pupils intrusted to them. Taken together, drawing and constructive work constitute what is properly called manual training, the educational value of which has been established beyond all contravention both by argument and by experiment. It aims to develop in the pupil powers of thought-expression that no other study reaches, as well as to train the judgment, to call out the executive powers, and to give self-confidence in dealing with actual material. It serves also to illustrate much of the instruction in mathematics and in natural science. Many secondary school pupils may wish to follow manual training beyond the mere rudiments, and with more especial reference to its scientific and technological applications.

It may be added, for the sake of definiteness, that the constructive work will naturally employ for its material pasteboard, clay, soft wood, and metal successively. It is at this point in particular that vocational preparation will make its appearance in the field of secondary education. According as these topics of drawing and constructive work are more completely developed and emphasized, so will

the secondary school take on more and more the characteristics of an institution having in view preparation for various practical activities.

8. *Physical Training*—For obvious reasons this important subject finds a place in every part of the course. More time is to be allotted to it in the earlier years because at that time the pupil is less accustomed to the confinement of the schoolroom and to the strain of continuous mental exertion. At this stage, too, important physical habits are formed, for instance those of breathing, walking, and sitting; and when formed correctly they reduce somewhat the time necessary for systematic bodily training. Whenever possible this physical training might be given in the open air of a playground. Such an arrangement not only involves a change of surroundings and consequent rest for the pupil, but it means purer air in the lungs, purer blood in the veins, and an accompanying exhilaration that is in itself a powerful tonic, mental and physical. A valuable and indeed indispensable accessory of physical training is play, the free, unimpeded, wilful activity of the child. So great is its value that many are of opinion that it makes systematic physical training unnecessary. On this

Physical training

point I shall merely quote Doctor Hartwell, who seems to me to have correctly expressed the relation between play and systematic exercise in his admirable address before the Physical Training Conference held in Boston in November, 1889. Doctor Hartwell, in speaking of this matter, said:

> I have no disposition to disparage athletic sports. I would that they were more general and better regulated than they are in our country. I believe that they are valuable as a means of recreation; that they conduce to bodily growth and improvement; and that their moral effects are of value, since they call for self-subordination, public spirit, and co-operative effort, and serve to reveal the dominant characteristics and tendencies, as regards the temper, disposition, and force of will of those who engage in them. But they bear so indelibly the marks of their childish origin, they are so crude and unspecialized as to their methods, as to render them inadequate for the purposes of a thorough-going and broad system of bodily education. It is well to promote them, and it is becoming increasingly necessary to regulate them; but it is unsafe and short-sighted to consider them as constituting anything more than a single stage in the best bodily training.

When play and physical training are thus carefully distinguished, each is seen to have an educational function of its own and neither will be substituted for the other. Both are necessary in education.

It is believed that a course made up of these nine lines of study well distributed will meet all the intellectual wants of the boy from his eleventh to his eighteenth year, and will afford him a harmonious and complete training. Whether the pupil enters an institution of higher grade or not, he will have had an education substantially complete in itself. Yet for the studies of a higher institution he will have received an admirable preparation. The secondary school is in this way enabled to preserve its place in the general educational organization of the country without sacrificing its independence.

The secondary school and life

No less a man than Darwin has recorded the fact that his school-days, so far as his education was concerned, were an utter blank. Not infrequently men of less reputation, but yet prominent in their respective callings, express a similar opinion. This in itself is a danger-signal, and must be heeded. The school may not with impunity remain long out of touch with the spirit which animates the intellectual leaders of an age or generation. Its task grows more difficult as civilization grows more complex. "The most incessant occupation of the human intellect throughout life," said John Stuart Mill in his inaugural address as rector

of St. Andrews University, "is the ascertainment of truth." The standards of truth and the methods for its discovery must be revealed in and by the process of education. When this process has been carried so far as to entitle the resulting education to be called liberal, as Huxley for example has defined a liberal education, the youth is prepared to live not for himself alone, but for the society of which he forms a part and for the race of which he is a member. If the secondary school fails to obtain this larger view, its training will hardly contribute to an education which shall be, in the language of Rollin, "the source of certain peace and happiness both in the family and in the state."

XIII

THE AMERICAN COLLEGE AND THE AMERICAN UNIVERSITY

An Introduction to Paulsen's *German Universities, Their Character and Historical Development* (New York, 1895)

THE AMERICAN COLLEGE AND THE AMERICAN UNIVERSITY

Nowhere, outside of the German-speaking countries themselves, have the German universities been so highly appreciated and so widely imitated as in the United States. Just as the historic American college traces its origin in direct line to Oxford and Cambridge and their influence, so the new American university represents, to a remarkable degree, the influence and authority of the academic traditions of Heidelberg and Göttingen, of Leipsic and Berlin.

Distinction between college and university

The distinction between the function of the college and that of the university, which becomes clearer day by day to the student of education, has thus far proved too subtle to reach the understanding and too commonplace to satisfy the pride of the American people; for the existing terminology inextricably confuses colleges and universities, and sometimes even institutions that are little more than secondary schools, and it taxes the patience

and skill of the expert to disentangle them. If we cut the Gordian knot by allowing every institution founded for any form or phase of higher education to classify itself by the name that it assumes, then there are no fewer than 134 universities in the United States.[1] Of these, 7 are in Illinois (although the new University of Chicago was not included in the enumeration of 1890–1), 8 are in Kansas, 14 are in Ohio, 9 are in Tennessee (of which total the city of Nashville alone, with about 80,000 inhabitants, contributes 3), 8 are in Texas, and 4 are in the city of New Orleans. When this surprising number is compared with the total of 20 universities for the whole German Empire, it is evident, without further investigation, that there is some difference in standard between the two countries, and that to be a university in fact is something more than to be a university in name.

According to another extreme view, there are no American universities whatever. Only two years ago so distinguished an authority as Professor von Holst, formerly of Freiburg but now attached to the University of Chicago, said:[2]

[1] *Report of the Commissioner of Education*, 1890–1, pp. 1398–1413.

[2] *Educational Review* (1893), V, 113.

Are there American universities?

"There is in the United States as yet not a single university in the sense attached to the word by Europeans. All the American institutions bearing this name are either compounds of college and university—the university, as an aftergrowth, figuring still to some extent as a kind of annex or excrescence of the college—or hybrids of college and university, or, finally, a torso of a university. An institution wholly detached from the school work done by colleges, and containing all the four faculties organically connected to a *Universitas literarum*, does not exist."

Inasmuch as there is no common agreement among Europeans as to what the term "university" means—as may readily be seen by contrasting the University of Oxford with the University of France, and either or both with the University of Berlin—Professor von Holst obviously meant by European, German; and his definition of a university bears out this interpretation. With this limitation his judgment may be accepted as technically correct; but it rests upon two false assumptions: (1) that exact reproductions of the German universities should be developed in the United States, and that until this development takes place there will be no American universities;

and (2) that the American college is to be classed with the German gymnasium as a secondary school. Into these two blunders those observers of American educational organization who occupy the exclusively German point of view habitually fall; and in more than one instance the truest and most natural development of higher education in America has been impeded and retarded by the attempt, on the part of those who share Professor von Holst's errors, to force that development into the exact channels worn by German precedent.

The American university may, or rather must, learn the lessons that its German predecessor has to teach, but it should be expected to develop also characteristics peculiar to itself. In order to become great—indeed, in order to exist at all—a university must represent the national life and minister to it. When the universities of any country cease to be in close touch with the social life and institutions of the people, and fail to yield to the efforts of those who would readjust them, their days of influence are numbered. The same is true of any system of educational organization. For this reason alone, if for no other, an educational organization closely following the German type would not thrive in

America; indeed, with all its undisputed excellences, the German system would not meet our needs so well as the yet unsystematic, but remarkably effective, organization that circumstances have brought into existence. Therefore Professor von Holst is not likely at any time to see a single university in the United States, if he persists in giving to that word its technical German significance. But using the word in a broader, and, I believe, a truer sense—the sense that, while not confounding it with a college, however large or however ancient, nor applying it mistakenly to a college and a surrounding group of technical and professional faculties or schools, yet extends the term to include any institution where students, *adequately trained by previous study of the liberal arts and sciences*, are led into special fields of learning and research by teachers of high excellence and originality; and where, by the agency of libraries, museums, laboratories, and publications, knowledge is conserved, advanced, and disseminated—in this sense one may perhaps count six or eight American universities in existence to-day, and half as many more in the process of making.

Definition of a university

To confuse the American college with the German gymnasium is inexcusable. Neither

The American college

a large college like Princeton, nor a smaller one like Williams or Bowdoin, can be imagined as part of the gymnasial system. The American college is, in the phrase of Tacitus, *tantum sui similis;* neither the English public school, the French lycée, nor the German gymnasium, is its counterpart. Its free student-life and broad range of studies liken it in some degree to a university; but the immaturity of its students, the necessarily didactic character of most of the work of its instructors, and the end that it has in view mark it off as belonging to a different type. The college has proved to be well suited to the demands of American life and to be a powerful force in American civilization and culture. Its usefulness is in nowise impaired or its dignity lessened now that the university, with a wholly different aim and a totally different set of problems to solve, has grown up by its side. As President Hyde, of Bowdoin College, has truly and forcibly said:[1] "For combining sound scholarship with solid character; for making men both intellectually and spiritually free; for uniting the pursuit of truth with reverence for duty, the small college [and the large as well], open to the worthy graduates of every

[1] *Educational Review* (1891), II, 320, 321.

good high school, presenting a course sufficiently rigid to give symmetrical development and sufficiently elastic to encourage individuality along congenial lines, taught by professors who are men first and scholars afterward, governed by kindly personal influence and secluded from too frequent contact with social distractions, has a mission which no change of educational conditions can take away, and a policy which no sentiment of vanity or jealousy should be permitted to turn aside."

The college population

In 1891 there was one student enrolled in a college of the liberal arts and sciences for every 1,363 inhabitants of the United States.[1] Counting five persons to a family,[2] this means that one family in every 272.6, the country over, contributed to the college population. Of course, in some sections of the country the ratio was much less. In Massachusetts, for example, there was one college student for every 858 of population, or one for every 171.6 families. In Iowa the proportion was one to 908 persons, or 181.6 families; in Utah, one to 789 persons, or 157.8 families. These statistics, read in relation to the vast extent of the

[1] *Report of the Commissioner of Education*, 1890–1, p. 827.

[2] The actual ratio in the United States in 1890 was 4.93 (see *Abstract of the Eleventh Census*, 1890, p. 54).

territory of the United States and to the heterogeneousness of its population of 70,000,000, are ample proof, if proof were needed, that the college is a very familiar feature in American life, and that it supplies the educational needs of the people to a remarkable degree.

The college programme of study

Of the 481 American colleges, perhaps no two have precisely the same course of study or the same equipment; but the common features that distinguish them are well known. The ancient classics, mathematics, the English language and literature, the modern European languages, the natural sciences, economics, and philosophy are doubtless represented to some extent in every college curriculum; yet every phase of educational opinion and every variety of local interest are represented in the details of their arrangement. But we may be sure that wherever it is found, whether on the Atlantic seaboard, in some inland town of the West or South, or on the Pacific slope, the college is a force making for a broader intellectual life and a higher type of citizenship. It leaves to the university the task of educating specialists, investigators, and scientifically trained members of the learned professions.

The diversity of the college when contrasted

with the uniformity of the gymnasium makes it plain that the American university does not rest upon any uniform and closely controlled foundation. American students come to the university with very varied preparation in knowledge and training. But if the healthy forces recently set at work in the field of American higher education bring about their legitimate results, the efficiency of the university and its power for good will be distinctly increased rather than diminished by the fact that its students are not all cast in a common mould. The principles of the limited election of studies and of the adaptation of the curriculum to the pupil, rather than the pupil to the curriculum, are as sound when applied in the secondary school as in the college, and the scope of their application widens year by year. The American college graduate who desires a university career is thus enabled to enter upon it a broadly and liberally educated man, with tastes formed and aptitudes developed, ready to undertake with immediate advantage the specialized work for the sake of which the university exists. He is much more widely, though certainly less minutely, trained than the German *Abiturient*.

In one very important respect the American system of higher education is distinctly supe-

Higher education in America and in Germany

rior to the German. In Germany a clear-cut dividing line between the gymnasium and the university is drawn by the complete and carefully preserved difference in method, in spirit, and in ideal that exists between them. The contrast between the narrowness of the gymnasium and the generous freedom of the university is very sharp, and many a university student loses his balance entirely, or wastes much precious time and force, in adjusting himself to his totally new surroundings. In America, on the contrary, the college and the university sometimes exist side by side in the same corporation, as at Harvard, Johns Hopkins, Columbia, and Chicago, and the work of the one passes gradually and insensibly into that of the other. Even when, as is generally the case, the college exists as a thing apart, the later years of its course of study are so organized and conducted as to make the transition from college to university easy and natural. This practise is sound in psychology, sound in economics, and sound in common sense. Its practical success is amply demonstrated by the fact that there is no American university—unless that name be given to the few partially developed departments of study represented at Worcester, Massachusetts—that is not in the closest relation to a college which is a member

of the same corporation. The institutions that to Professor von Holst are "compounds of college and university" are, therefore, not, as he evidently thinks, compounds of gymnasium and university, but the peculiar product of the American educational organization and its peculiar strength.

But though the foundation on which university work in America rests differs and will continue to differ from that provided in Germany by a uniform system of state-controlled gymnasiums, the university itself is essentially the same; indeed, its organization has been effected largely by men who had studied in the German universities, and who desired to develop in the United States a similar vehicle for the highest form of the scientific activity of the nation. The three fundamental principles that the German universities have established and brilliantly illustrated, *Lehrfreiheit*, *Lernfreiheit*, and the pursuit of science for its own sake, are fully recognized in the American universities; although it cannot be said that the third principle is as fully lived up to as it ought to be. Professor Paulsen has himself pointed out in his latest publication on the subject[1] that the peculiar character of the German university lies in the fact that it closely

[1] *Deutsche Rundschau*, September, 1894.

connects research and teaching. At present complaint is made that the one aim, research, is too largely pursued at the expense of the other, with the undoubted result, as a German university professor admits,[1] that, considered merely as teaching institutions, the American universities surpass the German in efficiency. The emphasis often laid on teaching, at the expense of research, in the American universities is largely due to the fact that the older generation of American university professors are men who were for many years engaged in the work of purely collegiate teaching, and they have neither outgrown nor cast off the habits and methods of years, nor combined research with teaching in any marked degree. This, of course, is quite as much to be deprecated as an exaggeration of the opposite tendency. The younger generation of university teachers, however, a large proportion of whom have been trained in Germany, combine research with teaching in almost every instance; though, happily, research is not yet reduced to work with "the lens, electrode, test-tube, and psychometer," which apparently seems to Doctor G. Stanley Hall to cover the field of

Teaching and research

[1] Professor Hugo Münsterberg, quoted in *Educational Review* (1894), VII, 204.

possible investigation.[1] It is possible, of course, in the enthusiastic devotion to research to overlook entirely or to minimize the need of good teaching in universities, and also to exaggerate the influence of research in producing good teachers; but from present indications, this is not a source of immediate danger in the United States. Our wisest university teachers are in agreement with Virchow, who said recently[2] that the aim of university study is "general scientific and moral culture together with the mastery of one special department of study."

The technical school in the university

The main obstacle to the full establishment in America of the pursuit of science for its own sake, as a controlling university principle, is the development and rapid growth of technical schools, with low standards of entrance, in connection with universities, and their admission to a full and even controlling share in university legislation and administration. Indeed, in this lies the chief danger to the integrity of American university development. Thus far the Johns Hopkins University has escaped these influences entirely, and Harvard University and Columbia University have been

[1] See "Research the Vital Spirit of Teaching," *The Forum*, August, 1894.

[2] *Lernen und Forschen* (Berlin, 1892), p. 8.

able to hold them in check. But at some other institutions they are strong and menacing. The danger consists in allowing the claim that closely specialized work in a purely technical or professional branch, entered upon without any broad preparatory training whatever, is to be regarded as legitimate university work and entitled to the time-honored university recognition and rewards. It need hardly be pointed out to the intelligent reader that the tendency to do this is under full headway in the United States, and that its essential narrowness and philistinism increase with its success in establishing itself. The general public attributes unmerited scientific importance to technical schools established in connection with colleges and universities because of their large enrolment; and governing boards look upon them with favor both because of the influence they exert through their graduates and because they are often important sources of revenue. Both facts tend to divert attention and funds from the pursuit of science as an end in itself, and to keep that principle from controlling university policy as it should. The difficulty would be diminished, and perhaps removed, if these technical schools (law, medicine, technology, and the like) were put upon a true university

basis by insisting upon a liberal education as a prerequisite for admission to them. This would bring about a condition analogous to that which prevails in Germany, and would raise the American universities to a plane that they have never yet occupied. For there are as yet very few professional schools in America of full university rank. Most professional and technical schools admit to their courses and degrees immature students who have had only a partial secondary school training, or often no training at all. When such a state of affairs exists within a university organization, it is apparent that the technical or professional schools are an injury rather than a legitimate source of pride and strength, no matter how many hundreds of students they may attract. Indeed, the larger they become the greater is their influence for evil, for their teaching is necessarily brought down to the level of the least-trained intelligences among the heterogeneous body of students, and in this way the standard of the whole university is lowered.

Schools of applied science

So far as this tendency exists in the case of schools of applied science, it must be confessed that its existence is largely due to the attitude of the partisans of the old-fashioned uniform

college course. By refusing to mathematical and scientific studies an equal place by the side of Greek and Latin, they forced the schools of science to establish themselves—in many cases on the narrowest possible educational basis—outside of the college and in competition with it; when, with a broad and generous treatment of the problems involved, the scientific or technical course might have been grafted on the college in a way that would have been of inestimable value both to the technical school and to the college, and greatly to the advantage of the cause of liberal education. The time when this could have been accomplished easily is past; but it can yet be brought about if undertaken in the right spirit and with wisdom.

Schools of law and of medicine

It is seemingly impossible for universities generally to raise their schools of law and medicine to university rank in the face of public indifference as to the educational qualifications of lawyers and physicians. How long this indifference will continue unmoved, there are no means of determining. Here and there efforts are making to insist upon some portion, at least, of a secondary education as a qualification for admission to schools of law and medicine. But as a rule admission to the practise of those professions is open to any one,

however ignorant, who will serve a short term of apprenticeship. This arrangement is sometimes defended on the ground that many men have in the past greatly distinguished themselves as lawyers or physicians, though without any liberal education whatever. This is true, but they were rare exceptions; and they become rarer each year as competition grows closer and more pressing. So far as law, at least, is concerned, one reason for the prevailing laxity may be found in the fact that this profession offers the easiest mode of entrance into politics; and to engage in that field of activity is often a chief aim in the minds of many young men who have no desire for a liberal education. But whatever public opinion may rest satisfied with, it seems indisputable that universities owe it to themselves to put their stamp upon no graduates in law, medicine, and technology who are not liberally educated men.

The unity of the true university

When the technical and professional schools shall have been raised to true university rank, one series of problems will be solved; but others will remain. It is as necessary in America, as Paulsen describes it to be in Germany, to conserve the unity of the university about the historic faculty of philosophy as a centre.

This faculty is at once the essence of a university and its true glory. Standing alone it may justify the title university, as the history of the Johns Hopkins University for twenty years amply demonstrates. But to make it subordinate or to keep it weak and unimportant, whether by subdivision or other means, is to sap the university's life-blood. The faculty of philosophy represents, when undivided, the unity of knowledge and the true catholicity of scholarly investigation. Through it each department of study is kept in sympathy with its fellows, and each strengthens and supports the rest. When dissevered, its parts tend to become mere *Fachschulen;* and the highest ideals of university life are sacrificed. No stronger evidence in support of this opinion can be cited than the emphatic statements on the subject made by du Bois-Reymond, the physiologist, and by Hofmann, the chemist, in their inaugural addresses on assuming the rectorship of the University of Berlin in 1869 and 1880, respectively. These are the words of du Bois-Reymond: "The philosophical faculty forms the connecting-link between the remaining faculties. . . . The reciprocal action of the different branches of human knowledge which takes place within the philosophical

faculty, would naturally be lost with its division, but this mutual influence contributes very much to widen the vision of the individual, and to preserve in him a right judgment of his position in relation to the whole. The two divisions of the faculty would finally approach the character of special schools; the ideal stamp of the whole would be destroyed."[1] And eleven years later Hofmann defended the same position with equal vigor.

The faculty of philosophy, or of arts and sciences, must not only be preserved in its integrity, but its spirit must dominate the whole university. As has recently been officially pointed out:[2] "The safety of the university spirit demands that the university proper [the faculty of philosophy] be counted as one part, and the collected schools [technical and professional] together as another rather than that each professional and technical faculty shall claim a co-ordinate right with the foundation faculty, which would thus be made, not a half, but a seventh (or possibly one-twentieth, as the schools multiplied) of the university which but for it could have no real existence." This is still another lesson

[1] *Ueber Universitäts-Einrichtungen* (Berlin, 1869), p. 15.

[2] See *Report of the Secretary of the University of the State of New York for* 1893, p. 176.

that the administrators of American universities have yet to learn.

Excessive specialization a danger

One other danger, common to all universities, whether German or American, lies in the excessive specialization which is so often warmly recommended to university students. Its inevitable result is loss of ability to see things in their proper proportions, as well as loss of sympathy with learning as a whole. Perhaps the division of labor cannot be carried too far for the value of the product, but certainly it can be carried too far for the good of the laborer.

> "Denn nur der grosse Gegenstand vermag
> Den tiefen Grund der Menschheit aufzuregen,
> Im engen Kreis verengert sich der Sinn."

Signs are not wanting that this narrowing of view and of sympathy is already taking place; but the university has in the faculty of philosophy the means to correct it if it will. What science and practical life alike need is not narrow men, but broad men sharpened to a point. To train such is the highest function of the American university; and by its success in producing them must its efficiency be finally judged.

XIV

THE PLACE OF COMENIUS IN THE HISTORY OF EDUCATION

An address before the Department of Superintendence of the National Educational Association, Brooklyn, New York, February 18, 1892

THE PLACE OF COMENIUS IN THE HISTORY OF EDUCATION

Travellers in distant lands describe rivers which are seemingly absorbed by the sandy desert. They disappear and leave little or no trace behind them. After a time, perhaps many miles away, the stream reappears. It gathers force and volume with going, and lends its fertilizing power to the surrounding country. Even when hidden to view, it has not ceased to exist. Though the arid wastes have concealed its course, its effect has been felt beneath the surface; and here and there is a green oasis to mark its silent path.

Comenius

Human history is rich in analogies to this natural phenomenon, and in Comenius the history of education furnishes its example. In life he was persecuted for his religious convictions and sought after for his educational ideas. In death, he was neglected and forgotten by friends and foes alike. It could be said of him as the Emperor Julian said of the Epicureans, he was so completely stamped out that even his books were scarce. But the great

educational revival of our century, and particularly of our generation, has shed the bright light of scholarly investigation into all the dark places, and to-day at the three hundredth anniversary of his birth the fine old Moravian bishop is being honored wherever teachers gather together and wherever education is the theme. We have found in Comenius the source and the forecasting of much that inspires and directs our new education.

It is difficult to project oneself back into a time when our present environment—social, political, material—was in its infancy and when modern invention had annihilated neither time nor space. It is still more difficult to give due credit to one who at such a time saw visions and dreamed dreams that we have since realized to the full. What is commonplace today, was genius three hundred years ago.

State of Europe in 1592

America was one hundred years old when Comenius was born, but the wilderness of the New World was unbroken. Neither at Jamestown nor at Plymouth had a permanent settlement been established. The Spanish Armada had just been defeated, and the future of Great Britain made secure. Shakspere, Spenser, Jonson, and Hooker were making Elizabethan literature. Francis Bacon was growing in

power and reputation, but the climax of his career was yet to come. Copernicus had done his work; but Galileo, Kepler, and Harvey were still young men. Montaigne was dying, and Giordano Bruno was soon to be led to the stake. Luther had finished his fight, and the shock of the contest was felt in every corner of Europe. The universities were growing in numbers and influence; but Descartes and Newton, with the secrets of modern philosophy and modern science locked in their breasts, were yet unborn. It was an age of growth, of development, of rapid progress; but what we know as modern ideas and institutions only existed in their beginnings. The education of the people, true to its conservative traditions, was still shackled. Sturm, the typical schoolmaster of partisan humanism, had endeavored to escape the unsatisfactory present by anchoring the school to the newly found past. Rabelais and Montaigne had scoffed and ridiculed in vain. Something more systematic and constructive than mere literary criticism of the extravagances of humanism was necessary if education was to be in touch with the time. The impetus to this constructive work, and many far-reaching suggestions concerning it, were given by Comenius.

Educational aim of Comenius

His own education was belated and deficient. Before it was concluded his reflective spirit was aroused, and Comenius conceived the idea of devoting his life to making the road to learning easier to travel for those who were to come after him. This philanthropic enthusiasm was natural to him and was fostered by the religious atmosphere in which he was born and brought up. It grew with years and became the ruling passion of his life. At the close of his work he could say with deepest feeling: "I can affirm from the bottom of my heart that these forty years my aim has been simple and unpretending, indifferent whether I teach or be taught, admonish or be admonished, willing to act the part of a teacher of teachers, if in anything it may be permitted me to do so, and a disciple of disciples where progress may be possible."

His teachers

The intellectual development of Comenius bears traces, both in its character and its direction, of the influence of five men. These are the Holstein educational reformer, Ratich or Ratke; the Irish Jesuit, Bateus; the Italian Dominican, Campanella; the Spaniard, Vives, the friend of Erasmus; the Englishman, Francis Bacon. From Ratich he learned something of the way in which language-teaching, the

whole curriculum of the time, might be reformed; and from Bateus he derived both the title and the plan of his *Janua*. Campanella suggested to him the necessity for the direct interrogation of nature if knowledge was to progress, and Vives emphasized for him from the same point of view the defects of contemporary school practise.

But it was Bacon's *Instauratio Magna* that opened his eyes to the possibilities of our knowledge of nature and its place in the educational scheme. The combined influence of Campanella, Vives, and Bacon caused him to throw off the traditional scientific methods of scholastic Aristotelianism, and to cry out for the observation and induction that have served later generations so richly. "Do we not dwell in the garden of Nature as well as the ancients?" he exclaims. "Why should we not use our eyes, ears, and noses as well as they? And why should we need other teachers than these our senses to learn to know the works of Nature? Why, say I, should we not, instead of these dead books, lay open the living book of Nature, in which there is much more to contemplate than any one can ever relate, and the contemplation of which brings much more of pleasure, as well as of profit?" These are the

thoughts that underlie the text-books of Comenius and gave them their value.

Comenius an exile

The early part of the seventeenth century was not a period when an aggressive and enthusiastic reformer like Comenius could work in peace anywhere in western Europe. On the Continent the Thirty Years' War was raging with all the bitterness and cruelty that a religious motive develops. In England the struggle between the Stuarts and the people was approaching its crisis, and the modern democratic spirit was crouching for a spring. Comenius was himself a follower of John Huss, who had paid for his principles with his life a century before. He himself and his beloved church suffered grievously during the turmoil and anarchy of the long struggle. When Fulneck was taken by the Spaniards in 1621, Comenius lost all that was dear to him—his wife and children, his manuscripts and his library. Hence he was an exile, wandering over the face of the earth preaching the gospel of education. In Michelet's significant phrase, he lost his country and found the world.

The Pansophia

Under the influence of Bacon, Comenius had advanced a stage beyond the mere desire to reform educational method, and conceived a plan for a Pansophia, a vast encyclopædia of

all the world's learning—Bacon's own *globus intellectualis*. His aim in this ambitious work was rather practical than speculative. To be sure, he wished to show that all departments of knowledge could be organized systematically in accordance with the new principles of method; but he was particularly anxious to husband the labors of scientific investigators all over the world by placing in their hands an account of all that was known, and so turn their attention and energy to new and unsolved problems. To obtain suggestions for this scheme and assistance in carrying it out, Comenius entered into an extensive correspondence with the leading men of science and patrons of learning in every country of Europe.

Comenius and Milton

He regarded his educational method as part of the Pansophia and an introduction to it. With feverish enthusiasm he pressed his projects upon the attention of prominent men, and became widely celebrated for his zeal, his lofty motives, and his educational propaganda. He corresponded, among others, with that modern Mæcenas, Samuel Hartlib, the friend of Milton. Together they planned for the establishment of an academy or college to carry out the Pansophic idea and to be the centre of the world's scientific advance in the

future. In 1641 Comenius journeyed to London, where he found that Hartlib had made him known to Parliament, and was in high hopes of securing from the government an endowment for the work. Hartlib had paved the way so cleverly that Comenius would probably have succeeded in this but for the political disturbances which were overshadowing everything else and rapidly plunging England into civil war. The Long Parliament had little time to think of education.

In Sweden and in Hungary

Baffled at this point, Comenius grasped at the next straw, which was an invitation to visit Sweden in the interest of his projects. This invitation came from de Geer, a wealthy Dutchman resident in Sweden, who remained a steadfast friend and patron while he lived. In Sweden Comenius was given a courteous and sympathetic hearing by Oxenstiern and the chancellor of the University of Upsala; but as practical men they advised him to subordinate his Pansophia to the more pressing reforms of school instruction. He did this under protest and only after some friction, and a number of publications bearing on methods of teaching were the fruit of his labors for the next seven or eight years. Then in 1650 he transported himself to the recesses of Hungary,

in responses to a request of Prince Sigismund, and spent four years in writing and organizing schools there. Of the rest of his life the greater part was passed at Amsterdam, in comparative retirement, and he died there in 1671, at the advanced age of eighty.

The dream of Comenius

The Pansophia of Comenius need not be seriously considered. Whatever may have been the arguments in its favor two hundred and fifty years ago, it has no significance now. The printing-press, the telegraph, the rapid and frequent communication between nations and peoples, have made it unnecessary and impossible. An important scientific discovery is known in Tokio, Sydney, and Valparaiso as soon as it is announced in New York or London. The dream of Bacon and Comenius was a noteworthy one, but it is largely owing to their own influence that its fulfilment in just the form they planned it was forever postponed. The world of learning has become its own Pansophia.

Comenius as forerunner of modern ideas

The verdict of the literary historian on Comenius, as voiced by Hallam, is that he was a man of "much industry, some ingenuity, and little judgment." The student of education, however, must take another and much broader view. In tracing contemporary

movements and ideas back to their sources, he finds that a surprisingly large number of them were absorbed from the progressive tendencies of the time and formulated for the school by Comenius. The elementary school course must be shortened and enriched, we say; the pupil is consuming his life in preparing for life, says Comenius. Rote-learning and mere memory-training are useless, we hear; my fundamental principle is that the understanding and the tongue should advance in parallel lines always, says Comenius. Not enough time and care are devoted to the teaching of English, it is said; instruction in the mother tongue must lie at the basis of all else, says Comenius. The list might be continued indefinitely. The infant school or kindergarten, female education, the incorporation of history and geography in the curriculum, the value of drawing and manual training, the fundamental importance of sense-training, the physical and the ethical elements in education, and finally that education is for all and not for a favored few only—were all articles in the creed of Comenius. Yet many of them are far from universally adopted to-day. Surely this man was a prophet!

The robust and practical character of the

proposals of Comenius is most apparent when they are contrasted with the educational doctrines of those who have come after him, particularly Locke, Rousseau, Pestalozzi, and Froebel. Frail as the psychology of Comenius was, it was truer than that of Locke. He knew that the human mind was an organism, an activity, a seed with wonderful potency of growth and development, and not a mere sheet of wax, as the Englishman taught, on whose passive surface the environment merely leaves certain impressions or traces. Locke's thought was of the education of the gentleman; Comenius proclaimed that education was for the race. The single point in which Locke corrected Comenius was in exalting character rather than knowledge as the chief aim in education.

Comenius and Locke

Of Rousseau one may say with Mr. Quick: "His writings and the results produced by them are among the strangest things in history; and especially in matters of education it is more than doubtful if the wise man of the world Montaigne, the Christian philanthropist Comenius, or that 'slave of truth and reason' Locke, had half as much influence as this depraved serving-man." Rousseau's enthusiasm took the form of theory run mad, and the practical impossibility of his educational plans was

Rousseau

only exceeded by their philosophical unsoundness. Comenius had been himself a teacher and an organizer of schools. He knew the practical limitations under which any theory is put when reduced to practise. He asked of the school and the pupil nothing that was impossible. He accepted society as he found it and would teach it to reform itself. Rousseau, on the other hand, was in revolt against the whole social order. He would like to break all its bonds and make of every individual a self-worshipping god.

Pestalozzi

There is nothing in the history of education so touching as the story of the life of Pestalozzi. His own immortal words, "I lived like a beggar to teach beggars to live like men," only half reveal the story of his unwearied patience, his intense suffering, his self-sacrifices for childhood. His life gave reality to his half-mystical principle that "the essential principle of education is not teaching; it is love." Yet his thought is relatively unimportant. Pestalozzi gave himself to education, but few new principles. His theory of the value of intuition needs to be carefully supplemented, and his insistence on the fact that education is development, a drawing out and not a putting in, merely repeats the thought on which all of

the work of Comenius was based. Without that principle, which Comenius had made familiar more than a century before, the work of Pestalozzi would have been of little importance in the history of education. Indeed, it would have been philanthropy merely, not education.

Froebel

Nor does it detract from the estimate to be put upon Froebel's teachings to say that in almost every important particular they were built upon foundations laid by the Moravian bishop. Froebel himself was strangely deficient in masculinity and in practical capacity. His exaggerated and absurd symbolism and his unbalanced religiosity give a certain curious interest and stimulus to his doctrines, but add nothing to their force or their permanent value. His seed-thought is again that of Comenius—educate by developing the pupil's own activity. Out of it and its corollaries the new education has grown.

Comenius and the modern movement in education

The place of Comenius in the history of education, therefore, is one of commanding importance. He introduces and dominates the whole modern movement in the field of elementary and secondary education. His relation to our present teaching is similar to that held by Copernicus and Newton toward mod-

ern science, and Bacon and Descartes toward modern philosophy. Yet he was not, in a high sense, an original mind. But his spirit was essentially modern and remarkably receptive. He assimilated the ideas that were inspiring the new civilization and applied them to the school. In an age of general ignorance, Comenius had an exaggerated idea of the importance of mere knowledge. This is easily understood and readily excused. Most of his educational tenets, preached with all the fervor of a Peter the Hermit and fought for with all the determination of a Cœur de Lion, have become commonplaces. But such is their value that we do well to pause to honor the memory of him who made them so.

XV

STATUS OF EDUCATION AT THE CLOSE OF THE NINETEENTH CENTURY

An address before the Department of Superintendence of the National Educational Association at Chicago, Illinois, February 27, 1900

STATUS OF EDUCATION AT THE CLOSE OF THE NINETEENTH CENTURY

The centuries

Imagination and feeling increasingly bear the brunt of shaping human opinion and human conduct. Intelligence does its organizing work and then disappears below the surface. Much of life goes on without its active cooperation, just as many of our mental reactions, first organized in the brain, come to be carried on through the spinal cord alone. When we stop to think, we realize that a century is of human making, a purely arbitrary division of time. Century might have been the name given to a longer or a shorter period, twenty years or two hundred, without doing violence to anything save present associations. The limits of a century are wholly imaginary. The skies do not change when a century is ushered in, or the thunders roll when it passes out. A century begins and ends as noiselessly and as unperceived as any moment which glides from the future into the past. Imagination, however, gives to the century an objective

reality, and feeling welds our thoughts to it. The arbitrary period of time which it covers, and the events which happen in that period, come to have for us a relation of cause and effect or of reciprocal dependence. We cannot rid ourselves of that feeling. Fancy, if you can, Attila charging upon the Western Empire in a century called the fifteenth instead of the fifth, or Louis XVI losing his head in the eighth century instead of the eighteenth, or Columbus discovering America in the twentieth.

We do well to resign ourselves to the spell of these mental creations, and to learn, as Macaulay somewhere said, to know our centuries. But who can *know* the nineteenth century? Development so rapid, changes so startling, inventions so undreamed of, crowd each other in a whirl of confusing images when we try to picture this century and to note its salient facts. It is the century of Napoleon and of Lincoln, of Hegel and of Darwin, of Goethe and of Kipling, of Bessemer and of Rockefeller. More leaders of enterprise and more captains of industry have appeared during this one hundred years than in all previous recorded history. The average of human intelligence and of human efficiency

has been raised to a point, in the United States certainly, which a few hundred years ago would have entailed notoriety, and perhaps distinction. Prosperity and querulousness, desire and happiness, have all multiplied together. How can all this be interpreted?

The nineteenth century

The wisest answer seems to me to be this: The nineteenth century is pre-eminently the period of individual liberty—political, religious, intellectual, industrial; and its manifold triumphs and achievements are due to the large opportunities which have been granted to individual initiative and to individual expression. The greatness, the shortcomings, and the contradictions of the nineteenth century are alike due to this.

It must be borne in mind that mankind discovered the significance of the individual rather late, and that, when discovered, this significance was variously interpreted. Man's early institutions and his law, based as they were on kinship, took the family, bound together by tie of blood, as the unit. The individual was of very secondary importance. The horde, the tribe, the state were successive aggregations of families, or, perhaps better, a larger family. The interest, the ambition, the vengeance of the group or community con-

trolled each individual's acts and, in large measure, his opinions and his thoughts. Under such circumstances education could only be tribal or ethnic in its aims and in its forms. It sought to reproduce a type, not to develop a capacity.

Development of the importance of the individual

The journey during the history of civilization from this point of view to one from which the individual is himself of importance is a long and arduous one. Of representative ancient thinkers the Sophists, the Cynics, and the Stoics alone championed the cause of the individual as such, and their appreciation of the real meaning of individualism was most imperfect. The Sophist hope that a man could spin a web of successful and useful existence out of the shadowy contents of his own perceptions, was dashed once and for all by Socrates. The Cynic revolt against social order and convention is typified by Diogenes with lantern and with tub. The Stoic outlook was a broader one, but it in turn was shut in by the massive height of an omnipresent, overruling law, before which man could only seek virtue through stern resignation. The clew suggested by the master-mind of Aristotle, by which the essential nature and the limitations of individualism might be made known, was

not fully followed up for centuries. Yet from the fifth century before Christ onward philosophy was increasingly becoming not only the science of human conduct, but the art of human living; and individualism was necessarily the gainer. How shall a man live to attain wisdom and virtue? was the question which the Greek and Roman moralists pressed home upon each individual listener with tremendous force. Then Christianity came, with its teaching of the equality of every human soul before the judgment-seat of God. Here, at last, individualism seemed to have found a secure foundation. The Sermon on the Mount was its charter and its moral guide. A man's salvation depended upon himself alone. Speedily, however, a reaction set in and the old habit of setting hard-and-fast limits for the individual asserted itself. Christianity grew rapidly into an elaborate system of doctrine to be held in its entirety *semper, ubique, ab omnibus*. On the other hand, the Roman jurists were elaborating a system of personal rights which was destined to afford individualism a new foothold and to exercise a profound influence upon European society. Superficially, then, individualism was checked by a body of doctrine, uniformly prescribed, which guided faith and practise; under

the surface, rights and opportunities for the individual continued to develop slowly. Education took on the form of the superficial appearance of uniformity, and for centuries the western world continued steadily to uncoil itself in constantly widening circles, but still in circles. At length, the inner contradiction between the two great elements of mediæval civilization asserted itself and the crash came. With the mocking jests of Rabelais, the caustic wit of Montaigne, the masculine fervor of Luther, pent-up individualism hurled itself against the bars which confined it. It broke through, now here and now there, and rushed headlessly hither and yon, searching for escape. It tried mysticism in religion as a relief from the clanking chains of dogma, and absolutism in politics as a protection from its nearest foes. Meanwhile, the crushing force of ancient tradition asserted itself with dogged determination. But it was too late; the long-checked desire for a freedom which was too often interpreted as anarchy, and for a liberty which in its newness appeared to mean license, could not be controlled. In its name the persistent Anglo-Saxon challenged the house of Stuart, and after two centuries worked himself substantially free from the old forms of bondage.

The more passionate and quick-moving Celt had to wait longer, but he acted more quickly. In the dramatic horrors and sublimities of the French Revolution he gained his immediate end at the risk of losing every precious possession of the race.

The smoke of the French Revolution hung over Europe when the nineteenth century opened. As it gradually cleared away it became obvious that the successful struggle of individualism for recognition was almost over, but that the results were to be worked out by argument, not by anarchy. The century soon to close records what happened.

Growth of emphasis on the individual in educational theory

Education, as a matter of course, has always borne the impress of the civilization whose product it was. From the fourteenth century to the nineteenth the demand of individualism for representation in the schools has been heard, now earnest and reasonable, now passionate and incoherent. Politics and religion so far overshadowed education in importance that it was a long time before there was any widespread recognition of the close relation in which education stood to them. On this matter the seventeenth and the eighteenth centuries brought great light, and there was new hope for the schools. False and partial

as we must hold much of the French and English philosophy of the eighteenth century to be, it is nevertheless to be credited with having convinced the world that a fundamental principle bound together rational progress in politics, in religion, and in education. To this conviction the nineteenth century has clung most tenaciously. The result has been an unexampled and dazzling expansion of educational endeavor and accomplishment.

When the century opened Rousseau had been dead nearly twenty-three years. Pestalozzi had just left Stanz for Burgdorf, and at the age of fifty-five was crying ecstatically: "The child is right; he will not have anything come between nature and himself." Froebel, an introspective youth of nineteen, was at Jena, at that moment the very centre of the productive activity of German thought. Reinhold had been expounding the new gospel according to Kant there, and Fichte had only recently been expelled while trying to interpret it. Then and there Froebel, as he himself said, began to know the names of Goethe and Schiller and Wieland. Hegel, too, was at Jena. His *Lehrjahre* were behind him, and at thirty years of age he was nearly ready to measure his strength with the masters. The lecture

programmes of the University of Jena, as has been said, at that time fairly "dripped" philosophy. Herbart, who had been one of Fichte's pupils at Jena a few years earlier, was still, at twenty-four, studying and giving private instruction. These five men—Rousseau, Pestalozzi, Froebel, Hegel, and Herbart—were to give to nineteenth-century education most of its philosophical foundation and not a few of its methods. From them have come the main influences which have shaped education for a hundred years.

Each one of the five plead in his way for the value of the individual. Rousseau, with no institutional sense and no insight into the meaning of history, exclaimed: "O man, concentrate thine existence within thyself, and thou wilt no longer be miserable. Thy liberty, thy power, extend only as far as thy natural forces, and no farther. All the rest is but slavery, illusion, prestige." Pestalozzi, whose intellect never quite caught up with his emotions, was really neglecting the individual by his method of trying to care for him. Froebel and Hegel saw far deeper. They knew the meaning of institutions, of thought-relations, of development, both inner and outer. They taught the individual as a *Gliedganzes*, a whole

and yet a part of a larger whole, and so gave us our truest view of individualism in education. Herbart's individualism was hard and mechanical, though his doctrine of apperception gave promise of something better and more vital.

These men, then, projected individualism into contemporary educational theory. They had hosts of disciples in many lands, and the movement grew apace. It needed, however, the touch of practise to make it genuinely real. This came after 1848, the line which divides the century into two parts—the earlier part dominated by thought, with spirits like Goethe, Wordsworth, Coleridge, and Emerson as its exponents, the later dominated by action with Lincoln, Gladstone, and Bismarck as exemplars. In 1848 the individual gained the foothold which he had struggled for, but lost, in the haste of 1789.

The new spirit of freedom

The pressure from practical life followed. The old educational material and the traditional educational methods were attacked with greater frequency and with greater vigor, as not adapted to modern needs. The ancient languages and the civilizations they embalmed were denounced as fetiches. The world's philosophy was nonsense; its art was archaic;

its literature pedantic and overlaid with form. Straightway altars were erected to new and unfamiliar gods; before all, to that product of the human understanding called science, which Mr. Herbert Spencer, with a humor quite unconscious, defined as partially unified knowledge. The new spirit exulted in its freedom. It accomplished much; it ignored much. In a thousand ways it impressed itself on life, on literature, and on art. Education was shaken to its foundations. Nothing was sacred. No subject of study, no method of teaching was immune. Old institutions of learning were too slow to move and to adapt themselves to these conditions. New ones were invented, created, set in motion. Wealth, public and private, poured out like water to make possible and to sustain these new types of school. The seven liberal arts faded into insignificance beside the endless list of subjects now found to be worthy of study.

This great, world-wide movement justified itself for the time by its results. Commerce, industry, and invention multiplied apace. The forces of nature were commanded through being obeyed. Education had become democratic, and was ready to offer training in preparation for any calling. The traditional list of learned

professions was increased by architecture, engineering, and a dozen more. Early and complete adaptation of the individual to his appropriate career was hailed as the new educational ideal before which all else must give way. In consequence, the hasty conclusion was drawn that not only methods of procedure in education, but the sole principles upon which to proceed, could be learned by the study of the infant mind and the infant body. Upon this as a basis a superstructure of educational theory and practise was erected, which would have delighted the heart of that arch-Philistine, Rousseau. All that had been was wasteful, misleading, wrong, not on its merits, but simply because it had been. The progress of the race in civilization was explained as having taken place in spite of men's ideals, not because of them; and it was therefore rejected as a source of inspiration and of information. Individualism had not only won a great victory, but apparently its opponents were annihilated.

Excesses of individualism

This new philosophy, however, had not established itself without a protest, and as this type of individualism became more and more extreme in its claims, the protest grew louder and more earnest. Could the crowded cen-

turies of the human past teach us nothing? Were the art of Phidias and of Raphael, the verse of Homer and of Dante, the philosophy of Plato and of Kant, the institutions of the Roman law and of constitutional government, all to depend for their educational meaning and value upon the carefully noted actions and preferences of the unformed infant in its cradle? The humor of the situation revealed itself, and the reaction set in.

The individual and institutions of civilization

Individualism had gone too far. In the effort of forming its fullest flower, it had torn itself up by the roots. History did mean something after all; and environment was discovered to be a thing of three dimensions, not of two only. Reflection succeeded to controversy. Meanwhile the new sciences of nature had themselves been studying embryology and heredity. These words took on new meanings. The individual was seen to be a product as well as a producer. Product of what? Of all that man had thought and done, and of his own infinitesimal self. But if this were true, then what of education? Obviously, the defenders of the new must shift their ground and retreat from the untenable position of Rousseau to the impregnable fortress, *Gliedganzes*, of Froebel, of Hegel, and of all philosophical teachers

of evolution. This change has been made, and as the century closes the soundest educational philosophy the world over teaches that the individual alone is nothing, but that the individual as a member of a society and of a race is everything. Selfhood, which can only be attained by entering into the life-history and the experience of the race, is now put in the high place which was about to be rashly filled by selfishness. True individualism, which would enrich the life of each with the possessions of all, is well-nigh supreme, and sham individualism, which would set every man's hand against his fellow, is disposed of, let us hope forever. Education rests securely upon the continuous history of man's civilization, and looks to the nature of each individual for guidance in the best methods of conducting him to his inheritance, but not for knowledge of what that inheritance is.

Influence of the doctrine of evolution

Every conception of this nineteenth century, educational as well as other, has been cross-fertilized by the doctrine of evolution. In whichever direction we turn we meet that doctrine or some one of its manifold implications. We have incorporated it into educational theory and have thereby shed a flood of light upon problems hitherto dark. Evolution has

assisted mightily in that interpretation of individualism which I have just defended. It has bound the universe together by homogeneous law, and the relations of each to all, both physical and social, have become far clearer and more definite. But much remains to be done in applying the teachings of evolution in actual plans and methods of instruction. The application is going on, however, all around us and without cessation, and is the cause of not a little of the existing educational inquiry and unrest. Our schools have shed one shell and the other is not yet grown. Illustrations of this will be found in the teaching of mathematics, of language, of history, and of the natural sciences. We halt often between the logical and the psychological order, failing to appreciate that evolution gives a place to each. The logical order is the order of proof, of demonstration; the psychological order is the order of discovery, of learning. Children do not learn logically; they come later to see logical relations in what they have learned. The well-equipped teacher knows both logic and psychology. He is prepared to guide the pupil in his natural course of learning, and also to point out to him the structure of relationship of what he has learned. Text-book writers the

The logical and the psychological order

world over have been slow to see this distinction; but with but few exceptions, the best American text-books, which control so powerfully all school processes, are in advance of those most in use in Europe. The logical order is so simple, so coherent, and so attractive, that it seems a pity to surrender it for the less trim and less precise order of development; but this will have to be done if teaching efficiency according to evolution is to be had.

The course of evolution in the race and in the individual furnishes us also with the clew to the natural order and the real relationships of studies. It warns us against the artificial, the bizarre, and points us to the fundamental and the real. Only educational scholarship can protect the schools against educational dilettantism.

Evolution and individualism

Two lines are needed to determine the position of a point. The two principles of evolution and of an individualism viewed in the light of the history of civilization, seem to me to determine the status of education at the close of the century. The working of these principles is exemplified in practise in a thousand ways. They lie behind and determine every effort for improvement and for progress.

The diverse types of school, higher and lower, with their widely different special ends and yet with a common fund of basic knowledge which they all impart, reveal a purpose to cultivate and to adapt the special powers and talents of the individual, while holding him in touch with the life and the interests of his kind. The existence of the wonder-working elective system in secondary schools and colleges, together with the limitations put upon it, is due to a real as opposed to a sham individualism. The marked emphasis now laid upon the social aspect of education, in Europe as well as in the United States, and also upon the school as a social institution and a social centre, is additional evidence of the dominance of the individualism of Froebel rather than that of Rousseau. The demands for the establishment of a proper system of secondary education in England, for the making over of the secondary school systems of France and of Germany, for the closer articulation of lower schools and higher schools, of schools and colleges, in the United States, for making elementary school instruction as little wasteful and as full of content as possible, for bringing forward studies which give adequate scope for expression in various forms, and the demand

that the community shall relate itself to its educational system simply and effectively—all these are based, consciously or unconsciously, upon the desire to apply the teachings of evolution and to progress toward the ideal of a perfected individualism.

New importance of education as a government function

Education, so conceived and so shaped, has made an irresistible appeal to every civilized nation. During the century education has definitely become a state function, not as a dole but as a duty. Consequently, the public expenditure for education has become enormous. In the United States it amounts annually to $200,000,000 for the common schools alone, or $2.67 per capita of population. This sum is about one-tenth of the total wealth of Indiana or of Michigan as determined by the census of 1890. In Great Britain and Ireland the total public expenditure on account of education is over $88,000,000, or $2.20 per capita. In France it is about $58,000,000, or $1.60 per capita. In the German Empire it is over $108,000,000, or more than $2.00 per capita. These four great nations, therefore, the leaders of the world's civilization at this time, with a total population of nearly 210,000,000, are spending annually for education a sum considerably greater than $450,000,000.

The annual expenditure of the United States for common schools is quite equal to the sum total of the expenditures of Great Britain, France, and Germany combined upon their powerful navies. It is nearly four-fifths of the total annual expenditure of the armed camps of France and Germany upon their huge armies. It is a sum greater by many millions than the net ordinary expenditures of the United States Government in 1880. This expenditure for common schools has nearly trebled since 1870, and during that period has grown from $1.75 to $2.67 per capita of population and from $15.20 to $18.86 for each pupil enrolled.

These imposing and suggestive statistics mark, in the most objective fashion possible, the distance we have travelled from the beginning of the century, when there was literally no such thing in existence anywhere in the civilized world as a state system of education. But pride of achievement should yield to a feeling of responsibility for the future. In the light of the nineteenth century no man dare prophesy what the twentieth century will bring forth. We only know that a democracy shielded by insight into the past and armed with trained minds, disciplined wills, and a scientific method, is as ready as man's imperfect

wisdom can make it for whatever may come in the future.

Daniel Webster, in his oration at the laying of the corner-stone of the Bunker Hill monument, exulted honestly in the conviction that the example of our country was full of benefit to human freedom and to human happiness everywhere. "We can win no laurels in a war for independence," he said. "Earlier and worthier hands have gathered them all. Nor are there places for us by the side of Solon, and Alfred, and other founders of states. Our fathers have filled them. But there remains to us a great duty of defense and preservation; and there is opened to us, also, a noble pursuit, to which the spirit of the times strongly invites us. Our proper business is improvement." This injunction laid upon Americans by their great orator three-quarters of a century ago, has lost none of its force. It applies with peculiar directness to teachers and to teaching. The glory of founding educational systems cannot be ours; but the effort for improvement, by building wise practise upon sound theory, is within the reach of each one of us.

XVI

SOME FUNDAMENTAL PRINCIPLES OF AMERICAN EDUCATION

An address before the Convocation of the University of the State of New York, at Albany, New York, June 30, 1902

SOME FUNDAMENTAL PRINCIPLES OF AMERICAN EDUCATION

It was my good fortune to hear one of General Garfield's most eloquent speeches. From the gallery of a great hall I looked down upon a scene where ambition, envy, and patriotism were all struggling for expression in the national convention of a powerful political party. A candidate for President of the United States was to be chosen. The walls had trembled at the mighty cheers that thousands of strong, eager men had given for the leaders of their choice. Finally, amid perfect silence, General Garfield rose in his place among the representatives of Ohio and made his way to the platform to put before the convention the name of the man whom he preferred above all others for President of the United States. He had been greatly moved by the tempest of cheering and applause which had greeted two of the names already in nomination, and he sought to lead the convention away from the passionate feeling of the moment to a more sober

and substantial standard of judgment. With solemnity and deliberation, General Garfield opened his speech with these sentences:

I have witnessed the extraordinary scenes of this convention with deep solicitude. Nothing touches my heart more quickly than a tribute of honor to a great and noble character; but as I sat in my seat and witnessed this demonstration, this assemblage seemed to me a human ocean in tempest. I have seen the sea lashed into fury and tossed into spray, and its grandeur moves the soul of the dullest man; but I remember that it is not the billows, but the calm level of the sea, from which all heights and depths are measured.

When the storm has passed and the hour of calm settles on the ocean, when the sunlight bathes its peaceful surface, then the astronomer and surveyor take the level from which they measure all terrestrial heights and depths. . . .

Not here, in this brilliant circle where 15,000 men and women are gathered, is the destiny of the Republic to be decreed for the next four years. Not here, where I see the enthusiastic faces of 756 delegates, waiting to cast their lots into the urn and determine the choice of the Republic; but by four millions of Republican firesides, where the thoughtful voters, with wives and children about them, with the calm thoughts inspired by love of home and country, with the history of the past, the hopes of the future, and reverence for the great men who have adorned and blessed our nation in days gone by, burning in their hearts—*there* God prepares the verdict which will determine the wisdom of our work to-night.

Often in listening to debates and discussions of matters far removed from things political, this counsel of Garfield's has recurred to me. It seems to be so easy, in education as elsewhere, to yield to the pressure of momentary feeling or temporary expediency and to lose sight of the deep underlying principles which should, and in the long run must, control our action and our policies, that we need constant reminder of what those principles are. Therefore, in accepting the invitation to address the Convocation of the University of the State of New York, I shall endeavor to place before you, though with necessary brevity, some principles which appear to me to be fundamental in our American educational system and policy. I am the more ready to do this because, during the last two or three years, in important debates, I have observed that some of these considerations have been overlooked or their existence flatly denied.

First and foremost, I name this proposition and hold it to be fundamental to our American educational system:

American education not exclusively a government function

While all forms of education may be under government control, yet government control of education is not exclusive, and the national system of education in the United States in-

cludes schools and institutions carried on without direct governmental oversight and support, as well as those that are maintained by public tax and administered by governmental agencies.

Some very important consequences follow from the acceptance of this principle. A nation's life is much more than an inventory of its governmental activities. For example, the sum total of the educational activity of the United States is not to be ascertained by making an inventory of what the government—national, State, and local—is doing, but only by taking account of all that the people of the United States are doing, partly through governmental forms and processes and partly in non-governmental ways and by non-governmental systems. In other words, the so-called public education of the United States, that which is tax-supported and under the direct control of a governmental agency, is not the entire national educational system. To get at what the people of the United States are doing for education and to measure the full length and breadth of the nation's educational system, we must add to public or tax-supported education, all activities of similar kind that are carried on by private corporations, by voluntary associations, and by individuals. The nation is

represented partly by each of these undertakings, wholly by no one of them. The terms national and governmental are happily not convertible in the United States, whether it be of universities, of morals, or of efficiency that we are speaking.

Public character of non-tax-supported education

This point is of far-reaching importance, for it has become one of the political assumptions of our time that any undertaking to be representative of the nation must be one which is under governmental control. Should this view ever command the deliberate assent of a majority of the American people, our institutions would undergo radical change and our liberties and right of initiative would be only such as the government of the moment might vouchsafe to us. But we are still clear-sighted enough to realize that our national ideals and our national spirit find expression in and through the churches, the newspaper press, the benefactions to letters, science, and art, the spontaneous uprisings in behalf of stricken humanity and oppressed peoples, and a hundred other similar forms, quite as truly as they find expression in and through legislative acts and appropriations, judicial opinions, and administrative orders. The latter are governmental in form and in effect; the former are

not. Both are national in the sense that both represent characteristics of the national life and character.

The confusion between a nation's life and a nation's government is common enough, but so pernicious that I may be permitted a few words concerning it.

Government and liberty

When Hegel asserted that morality is the ultimate end for which the state—that is, politically organized mankind—exists, he stated one of the profoundest moral and political truths. But it is pointed out to us by political science that before any such ultimate end can be gained, the proximate end of the development of national states must be aimed at. The state operates to develop the principle of nationality which exists among persons knit together by common origin, common speech, and common habitat, through creating and perfecting two things—government and liberty. The first step out of barbarism is the establishment of a government strong enough to preserve peace and order at home and to resist successfully attack from without. This accomplished, the state must turn to the setting up of a system of individual liberty. It does this by marking out the limits within which individual initiative and autonomy are per-

mitted, and by directing the government to refrain from crossing these limits itself and to prevent any one else from crossing them. After government and liberty have both been established, then all subsequent history is the story of a continually changing line of demarcation between them, according as circumstances suggest or dictate. In the United States, for example, the post-office is in the domain of government; the express business and the sending of telegrams are in the domain of liberty. In different countries, and in the same country at different times, the line between the sphere of government and the sphere of liberty is differently drawn. In Germany the conduct of railways is largely an affair of government; in the United States it is largely an affair of liberty. Schools, for example, are to-day much more an affair of government than ever before, but they are still an affair which falls in the domain of liberty as well. In short, government plus liberty, each being the name for a field of activity, gives the complete life of the state; government alone does so just as little as the sphere of liberty alone would do so. These principles are all set forth with great lucidity and skill by my colleague, Professor Burgess, in his work entitled *Political*

Science and Comparative Constitutional Law. In discussing this distinction he writes:

> It is often said that the state does nothing for certain causes, as, for instance, religion or the higher education, when the government does not exercise its powers in their behalf. This does not at all follow. If the state guarantees the liberty of conscience and of thought and expression, and permits the association of individuals for the purposes of religion and education, and protects such associations in the exercise of their rights, it does a vast deal for religion and education; vastly more, under certain social conditions, than if it should authorize the government to interfere in these domains. The confusion of thought upon this subject arises from the erroneous assumptions that the state does nothing except what it does through the government; that the state is not the creator of liberty; that liberty is natural right, and that the state only imposes a certain necessary restraint upon the same. . . . There never was, and there never can be, any liberty on this earth and among human beings outside of state organization. . . . Mankind does not begin with liberty. Mankind acquires liberty through civilization. Liberty is as truly a creation of the state as is government.[1]

A written constitution, it may be added, is a formal act of creation of a government and a careful delimitation of its powers. It also defines the sphere of individual liberty, directly or indirectly, and so the individual is protected by the state against the government. Through

[1] *Op. cit.* (Boston, 1890), I : 87–89.

the government he is also protected against encroachment from elsewhere. In the Constitution of the United States, for example, the individual is guaranteed by the state the rights peaceably to assemble and to petition the government for a redress of grievances, and the government must both refrain from invading those rights and prevent others from invading them. If the government should fail to do this, the state which created the government would surely remodel or destroy it.

I shall not apologize for this excursion into the domain of political science, inasmuch as I hold the distinction between state and government to be of crucial importance for right thinking upon the larger problems of our educational polity. When once the distinction between state and government is grasped, and also the further distinction between the sphere of government and the sphere of liberty, then it is seen to be a matter of expediency, to be determined by a study of the facts and by argument, whether a given matter—such as support of schools or the control of railways and telegraphs—should be assigned to the sphere of government or to the sphere of liberty.

In the United States there are three differ-

The three types of American educational institution

ent types of educational institution, all resting upon the power of the State. One of the three depends wholly and one partly upon the government. The third type is without any governmental relationship whatever. The three types are these:

1. Those institutions which the government establishes and maintains, such as the public schools, the public libraries, and the State universities.

2. Those institutions which the government authorizes, such as school, college, and university corporations, private or semipublic in character, which gain their powers and privileges by a charter granted by the proper governmental authority, and which are often given aid by the government in the form of partial or entire exemption from taxation.

3. Those institutions which the State permits, because it has conferred on the government no power to forbid or to restrict them, such as private-venture (unincorporated) educational undertakings of various kinds.

National institutions not necessarily governmental

Our American educational system is made up of all these, and whether a given school, college, or university is national or not does not in the least depend upon the fact that it is or is not governmental. France and Germany

have great national universities which are governmental; England and the United States have great national universities which are non-governmental. Oxford and Cambridge are no less truly English, and Harvard and Columbia are no less truly American, because their funds are not derived from public tax and because the appointments to their professorships are not made or confirmed by government officers. Whether a given institution is truly national or not depends, in the United States, upon whether it is democratic in spirit, catholic in temper, and without political, theological, or local limitations and trammels. It may be religious in tone and in purpose and yet be national, provided only that its doors be not closed to any qualified student because of his creed.

It is worth noting that while in the United States the government bears nearly the entire brunt of elementary education, it finds a powerful ally in non-governmental institutions in the field of secondary and higher education. The statistics gathered by the commissioner of education show that for the year ending June 30, 1900, of all elementary school pupils 92.27 per cent were enrolled in governmental institutions, while for secondary and higher edu-

cation the percentages were 73.75 and 38.17 respectively. In other words, non-governmental institutions—those which are loosely described as private schools and colleges—are instructing about 1–13 of the pupils of elementary grade, about 1–4 of the pupils of secondary grade, and about 2–3 of the pupils of higher grade. Almost exactly 1–10 of the whole number of pupils of all grades are enrolled in non-governmental, so-called private, institutions. It is just this word "private" which increases the confusion against which my argument is directed. It is my contention that none of these institutions is properly described as "private"; they are all public, but not all governmental. If this point is clear, then we shall have escaped the fallacies and dangers that follow from confusing tax-supported, governmental undertakings with public tendencies and movements. In education and in our political life generally, the public tendencies and movements are a genus of which governmental activities are a species.

As a second fundamental principle of our American educational system, I name this:

Scope of tax-supported education

The duly constituted authorities of any school district or other political unit may establish and maintain schools of any kind or

grade for which the voters consent in regular form to bear the expense.

There is a wide-spread belief that elementary education under government control is a matter of right, but that secondary and higher education under government control are improper invasions of the domain of liberty. There is no ground in our public policy for this belief. The government has the same right to do for secondary and for higher education that it has to do for elementary education. What and how much it shall do, if anything, in a particular case, is a question of expediency; the right to do as much as it chooses is unquestionable.

Upon this point there is an important decision,[1] made by unanimous vote of the Supreme Court of Michigan in 1874, which may fairly be taken to represent our established policy. The opinion was written by Justice Thomas M. Cooley, one of the most learned and authoritative of American constitutional lawyers. The decision was rendered in a suit known as "the Kalamazoo case," to restrain the collection of such portion of the school taxes assessed against the complainants for the year

[1] *Michigan Reports* (1875), 30 : 69–85. (Stuart *v.* School District No. 1 of Kalamazoo.)

1872 as was voted for the support of the high school and for the payment of the salary of the superintendent of schools in school district No. 1 of Kalamazoo. The position of the complainants, as stated by the court, was as follows:

> While there may be no constitutional provision expressly prohibiting such taxation, the general course of legislation in the State and the general understanding of the people have been such as to require instruction in the classics and in living modern languages in the public schools to be regarded as in the nature, not of practical and therefore necessary instruction for the benefit of the people at large, but rather as accomplishments for the few, to be sought after in the main by those best able to pay for them, and to be paid for by those who seek them, and not by general tax. And further, that the higher learning, when supplied by the State, is so far a matter of private concern to those who receive it that the courts ought to declare the State incompetent to supply it wholly at the public expense.

In answer to this contention the court expresses surprise that the legislation and policy of the State were appealed to against the right of the State to furnish a liberal education to the youth of the State in schools brought within the reach of all classes.

> We supposed [adds the court] it had always been understood in this State that education, not merely in the rudi-

ments, but in an enlarged sense, was regarded as an important practical advantage to be supplied at their option to rich and poor alike, and not as something pertaining merely to culture and accomplishment, to be brought as such within the reach of those whose accumulated wealth enabled them to pay for it.

The court then passes in review, in most instructive fashion, the development of the educational policy of the State from the beginning, and concludes, as follows:

We content ourselves with the statement that neither in our State policy, in our constitution, nor in our laws, do we find the primary-school districts restricted in the branches of knowledge which their officers may cause to be taught, or the grade of instruction that may be given, if their voters consent in regular form to bear the expense and raise the taxes for the purpose.

In consonance with this opinion is one delivered by the Supreme Court of Missouri in 1883,[1] in which it is held that the term "common," when applied to schools, is used to denote the fact that they are open and public to all rather than to indicate the grade of the school, or what may or may not be taught therein. The court also holds that the term "school" of itself does not imply a restriction to the rudiments of an education.

[1] See *Missouri Reports* (1882–3), 77 : 485–489.

It is interesting to contrast these decisions in Michigan and in Missouri with the conclusion reached by the Court of Queen's Bench in England in 1901 in the now famous case of the Queen *versus* Cockerton,[1] in which it is expressly held that it is not within the power of a school board to expend money raised by local taxes upon any education other than elementary. The terms of the Education Act of 1870 and of the many acts supplementary thereto no doubt justified the court's decision; but the fact that such a conclusion is based upon public policy has been brought to the attention of a large number of thoughtful persons, and has had no small part in the present educational debate which is much the most important matter before Parliament and the English people.

A third fundamental principle of our American education is this:

Tax-supported education as public service

The schools which are maintained by governmental authority are established in the interest of the whole people, and because of the controlling conviction that an instructed and enlightened population is essential to the perpetuity of democratic institutions and to their effective operation. The schools are therefore

[1] See *Law Reports, King's Bench* (1901), I : 322–360, 726–740.

a proper charge upon all taxpaying persons and property, and not merely upon those whose children receive instruction therein. Nor are they in any sense schools which are provided for the poor or the unfortunate.

When stated, this principle seems axiomatic. Nevertheless, it is openly or impliedly denied with surprising frequency. It is safe to say that in all of our large cities there is a class of persons, by no means inconsiderable in number, who look upon the tax-supported schools as they look upon almshouses and asylums. Such persons regard the schools as a part of the community's charitable or philanthropic equipment. In my view, on the other hand, the schools are a part of the community's life. They are not merely to give relief or shelter to individuals, they are to minister to the democratic ideal. The very children who sit on the benches are regarded not merely as children, interesting, lovable, precious, but as future citizens of a democracy with all the privileges and responsibilities which that implies. Over seventy years ago Daniel Webster stated this principle in language which cannot be improved:

"For the purpose of public instruction," said Webster, in his oration at Plymouth on Forefathers' Day in 1820,

Daniel Webster on taxation for public instruction

"we hold every man subject to taxation in proportion to his property, and we look not to the question whether he himself have or have not children to be benefited by the education for which he pays. We regard it as a wise and liberal system of police, by which property, and life, and the peace of society are secured. We seek to prevent in some measure the extension of the penal code by inspiring a salutary and conservative principle of virtue and of knowledge in an early age. We strive to excite a feeling of respectability, and a sense of character, by enlarging the capacity and increasing the sphere of intellectual enjoyment. By general instruction, we seek, as far as possible, to purify the whole moral atmosphere; to keep good sentiments uppermost, and to turn the strong current of feeling and opinion, as well as the censures of the law and the denunciations of religion, against immorality and crime. We hope for a security beyond the law, and above the law, in the prevalence of an enlightened and well-principled moral sentiment. . . . And knowing that our government rests directly upon the public will, in order that we may preserve it we endeavor to give a safe and proper direction to that public will. We do not, indeed, expect all men to be philosophers or statesmen; but we confidently trust, and our expectation of the duration of our system of government rests upon that trust, that, by the diffusion of general knowledge, and good and virtuous sentiments, the political fabric may be secure as well against open violence and overthrow as against the slow, but sure, undermining of licentiousness."

Here we have in the words of our greatest expounder of the underlying principles of Amer-

ican polity a statement of the philosophical basis upon which our tax-supported school system rests. We may wish that these schools did many things differently; we may not have children to send to their class rooms; nevertheless, they are our schools because we are American citizens, and we owe them our loyal service as well as our ungrudging support. Any one who wishes, for personal, social, or religious reasons, to have his child receive a training other than that which the tax-supported schools give, is at liberty to make such provision for his child as he chooses; but he is not thereby released from the obligation resting upon him as a citizen to contribute to the support of the tax-supported schools. It follows, too, that the parents of those who are pupils in the tax-supported schools have no peculiar rights in connection with the policy of those schools that are not shared by all other citizens. The schools are for the people as a whole, not for those of a district or ward, or of a political party or religious communion, or for those who are either poor or rich. We poison our democracy at its source if we permit any qualification of this fundamental principle.

It is sometimes gravely argued that posi-

tions as school officers or teachers should be given only to those who live, at the moment, in the civil community or subdivision in which the school in question is situated. This is the theory that the schools exist not for the people or for the children, but in order that places may be provided for the friends, relatives, and neighbors of those who are charged for the time being with the power of appointment. It is an undemocratic theory, because it substitutes a privileged class for open competition among the best qualified. Pushed to its logical extreme, it would look first in the ranks of the descendants of the aborigines for persons to appoint to posts in the educational system. Very few Americans live where their grandparents lived, and it is usually those who have come most recently to a city, town, or village who are loudest in insisting that no "outsider," as the saying is, be given a place as teacher or superintendent. The democratic theory, on the contrary, asks only for the best, and if the community cannot provide the best it holds that such community should enrich itself by bringing in the best from wherever it is to be had. As teaching becomes a profession, the teacher and school officer will acquire a professional reputation and status which will

make short work of town, county, and even State boundaries.

Three fundamental principles of American education

These three principles have been chosen for presentation and emphasis at this time because, although each of them is often denied, I believe them to underlie our whole educational system, and to condition all clear thinking and right action concerning it. They are, briefly, that:

1. American education is far wider than the system of tax-supported schools and universities, numerous and excellent as those schools and universities are. All schools, colleges, and universities, tax-supported or not, are public in the important sense that they all reflect and represent some part or phase of our national life and character.

2. There is no restriction upon the amount, kind, or variety of education which a district, town, or city may furnish, save that which is found in the willingness or unwillingness of citizens to vote the necessary taxes.

3. The tax-supported schools are public schools in the fullest possible sense, and are not maintained for the benefit of persons of any special class or condition, or from any motive

which may properly be described as charitable or philanthropic.

The constant application of these principles in educational debates and discussions would bring definiteness and clearness into many places that are now dark and uncertain, and would greatly promote the interest which we all have at heart—the conservation and upbuilding of our American democracy.

XVII

EDUCATION IN THE UNITED STATES

An Introduction to a series of monographs contributed by the State of New York to the United States Educational Exhibit at the Paris Exposition of 1900

EDUCATION IN THE UNITED STATES

Spontaneity is the keynote of education in the United States. Its varied form, its uneven progress, its lack of symmetry, its practical effectiveness, are all due to the fact that it has sprung, unbidden and unforced, from the needs and aspirations of the people. Local preference and individual initiative have been ruling forces. What men have wished for that they have done. They have not waited for State assistance or for State control. As a result, there is, in the European sense, no American system of education. There is no national educational administrative machinery and no national legislative authority over education in the several States. The bureau of education at Washington was not established until 1867, and save in one or two minor respects, its functions are wholly advisory. It is absolutely dependent upon the good-will of the educational officials of the States, counties, and municipalities and upon that of the administrative officers of privately conducted institu-

tions, for the admirable and authoritative statistics which it collects and publishes year by year. That these statistics are so complete and so accurate is evidence that the moral influence and authority of the bureau of education are very great, and that it commands a co-operation as cordial as it is universal.

National Government and education

But the National Government has, from the very beginning, made enormous grants of land and money in aid of education in the several States. The portion of the public domain hitherto set apart by Congress for the endowment of public education amounts to 86,138,473 acres, or 134,591 English square miles. This is an area larger than that of the six New England States, New York, New Jersey, Maryland, and Delaware added together. It is a portion of the earth's surface as great as the kingdom of Prussia, about seven-tenths as great as France, and considerably greater than the combined areas of Great Britain, including the Channel Islands, and the kingdom of Holland. The aggregate value of lands and money given for education by the National Government, as Commissioner Harris shows in detail,[1] is nearly $300,000,000.

[1] *Education in the United States* (new edition, New York, 1910), I : 96.

Education a State function

The uniform tendency of recent development, as marked by judicial decisions and by legislative enactments, is to treat all publicly controlled education as part of a slowly forming system which has its basis in the authority of the State government, as distinguished from that of the nation on the one hand and from that of the locality on the other. This system may be highly centralized, as in New York, or the contrary, as in Massachusetts, but the theory underlying it is the same. The two fundamental principles which are emerging as the result of a century's growth are, first, that education is a matter of State concern, and not merely one of local preference; and, second, that State inspection and supervision shall be applied so as to stimulate and encourage local interest in education and to avoid the deadening routine of a mechanical uniformity. The State acts to provide adequate opportunity for elementary education for all children, and abundant opportunity for secondary and higher education. But the State claims no monopoly in education. It protects private initiative, whether stimulated by religious zeal, philanthropy, or desire for gain, in doing the same thing. It is not customary, in the United States, for State officials to inspect or to inter-

fere with the educational work of privately established institutions. When these are chartered bodies, they are subject simply to the general provisions of law governing corporations of their class. When they are not chartered bodies, the State treats them as it does any private business undertaking: it lets them alone. Standards of efficiency and of professional attainment are regulated in these institutions by those in neighboring public institutions, by local public opinion, and by competition. Sometimes these forces operate to raise standards, sometimes to lower them. New York has gone further than any other State in attempting to define and to classify all educational institutions, private as well as public. Pennsylvania has recently entered upon a similar policy; and it is being urged in other States as well. The public elementary schools are more or less carefully regulated by law, both as to length of school term, as to subjects taught, and as to the necessary qualifications of the teachers. The public secondary schools, familiarly known as high schools, and the State universities are usually without any such regulation.

The term "common schools" is often used in the United States of the public elementary

Statistics of public education

schools alone; but the more correct use is to include under it all public elementary schools, the first eight years of the course of study, and all public secondary schools, maintaining a four years' course, as a rule, in advance of the elementary school. In 1897–8 the total estimated population of the United States was 72,737,100. Of this number 21,458,294—a number nearly equal to the population of Austria—were of school age, as it is called; that is, they were from 5 to 18 years of age. This is not the age covered by the compulsory education laws, but the school age as the term is used by the United States census. By school age is meant the period during which a pupil may attend a public school and during which a share of the public money may be used for his education. It is obvious, then, that persons who have satisfactorily completed both an elementary and a secondary course of study may still be returned as of "school age" and as "not attending any school." This fact has always to be taken into account in the interpretation of American educational statistics.

In 1897–8 the number of pupils entered upon the registers of the common schools—that is, the public elementary and the public secondary

schools—was 15,038,636, or 20.68 per cent of the total population and 70.08 per cent of the persons of "school age." The total population of Scotland and Ireland is only about half so many as this. For these pupils 409,193 teachers were employed, of which number 131,750, or 32.2 per cent were men. The women teachers in the common schools numbered 277,443. The teachers, if brought together, would outnumber the population of Munich. The women alone far more than equal the population of Bordeaux. No fewer than 242,390 buildings were in use for common-school purposes. Their aggregate value was nearly $500,000,000 ($492,703,781).

The average length of the annual school session was 143.1 days, an increase since 1870 of 11 days. In some States the length of the annual school session is very much above this average. It rises, for example, to 191 days in Rhode Island, 186 in Massachusetts, 185 in New Jersey, 176 in New York, 172 in California, 162 in Iowa, and 160 in Michigan and Wisconsin. The shortest average annual session is in North Carolina (68.8 days) and in Arkansas (69 days). Taking the entire educational resources of the United States into consideration, each individual of the popula-

tion would receive school instruction for 5 years of 200 days each. Since 1870 this has increased from 3.36 years, and since 1880 from 3.96 years, of 200 days each.

The average monthly salary of men teachers in the common schools was $45.16 in 1897–8; that of the women teachers was $38.74. In the last forty years the average salary of common-school teachers has increased 86.3 per cent in cities and 74.9 per cent in the rural districts. The total receipts for common-school purposes in 1897–8 were almost $200,000,000 ($199,317,597), of which vast sum 4.6 per cent was income from permanent funds, 17.9 per cent was raised by State-school tax, 67.3 per cent by local (county, municipal, or school district) tax, and 10.2 came from other sources. The common-school expenditure per capita of population was $2.67; for each pupil, it averaged $18.86. Teachers' salaries absorb 63.8 per cent ($123,809,412) of the expenditure for common schools.

The commissioner of education believes the normal standard of enrolment in private educational institutions to be about 15 per cent of the total enrolment. At the present time it is only a little more than 9 per cent, having been reduced apparently by the long period of

commercial and financial depression which has but lately ended.

Illiteracy

Illiteracy in the United States can hardly be compared fairly with that in European countries because of the fact that an overwhelming proportion of the illiterates are found among the negroes and among the immigrants who continue to pour into the country in large numbers. The eleventh census of the United States, taken in 1890, showed that the percentage of illiterates to the whole population was 13.3, a decrease of 3.7 per cent since the census of 1880. But the percentage of illiterates among the native white population (being 73.2 per cent of the whole) was only 6.2 of those ten years of age or older. Among the foreign-born white population (14.6 per cent of the whole) the percentage of illiteracy was 13.1, and among the colored population (12.2 of the whole) it was 56.8. That is, nearly one-half of the whole number of illiterates in the United States were colored. Only in Florida, Mississippi, West Virginia, Virginia, Kentucky, Georgia, Arkansas, Tennessee, South Carolina, Alabama, Louisiana, North Carolina, and New Mexico was the percentage of illiteracy among the native white population greater than 10. This percentage fell below 2 in New Hampshire

(1.5), Massachusetts (0.8), Connecticut (1), New York (1.8), District of Columbia (1.7), Minnesota (1.4), Iowa (1.8), North Dakota (1.8), South Dakota (1.2), Nebraska (1.3), Montana (1.6), Wyoming (1.3), Nevada (0.8), Idaho (1.9), Washington (1.3), Oregon (1.8), and California (1.7). In Kansas it was exactly 2.

Education and crime

It is not infrequently charged by those who have but a superficial knowledge of the facts, or who are disposed to weaken the force of the argument for State education, that one effect of the system of public education in the United States has been to increase the proportion of criminals, particularly those whose crime is against property. The facts in refutation of this charge are so simple and so indisputable that they should always be kept in mind.

In the first place, it must be remembered that communities which maintain schools have higher standards as to what is lawful than communities which are without the civilization which the presence of a school system indicates, and that, therefore, more acts are held to be criminal and more crimes are detected and punished in a community of the former sort than in one of the latter. A greater number of arrests may signify better police

administration rather than an increase in crime.

Again, where records have been carefully kept, it appears that the illiterate portion of the population furnishes from six to eight times its proper proportion of criminals. This was established for a large area by an extensive investigation carried on by the bureau of education in 1870.

The history of the past fifty years in the State of Massachusetts is alone a conclusive answer to the contention that education begets crime. In 1850 the jails and prisons of that State held 8,761 persons, while in 1855 the number had increased to three times as many (26,651). On the surface, therefore, crime had greatly increased. But analysis of the crimes shows that serious offenses had fallen off 40 per cent during this period, while the vigilance with which minor misdemeanors were followed up had produced the great apparent increase in crime. While drunkenness had greatly fallen off in proportion to the population, yet commitments for drunkenness alone multiplied from 3,341 in 1850 to 18,701 in 1885. The commitments for crimes other than drunkenness were 1 to every 183 of the population in 1850, and 1 to every 244 of the population in 1885.

In other words, as has been pointed out, persons and property had become safer, while drunkenness had become more dangerous—to the drunkard.

The American people are convinced that their public school system has justified the argument of Daniel Webster, made in 1820: "For the purpose of public instruction," he said, "we hold every man subject to taxation in proportion to his property, and we look not to the question whether he himself have or have not children to be benefited by the education for which he pays; we regard it as a wise and liberal system of police, by which property, and life, and the peace of society are secured. We seek to prevent, in some measure, the extension of the penal code by inspiring a salutary and conservative principle of virtue and of knowledge in an early age. We hope to excite a feeling of respectability and a sense of character by enlarging the capacities and increasing the sphere of intellectual enjoyment. . . . . Knowing that our government rests directly upon the public will, that we may preserve it we endeavor to give a safe and proper direction to the public will. We do not, indeed, expect all men to be philosophers or statesmen; but we confidently trust . . . . that by

the diffusion of general knowledge, and good and virtuous sentiments, the political fabric may be secure as well against open violence and overthrow as against the slow but sure undermining of licentiousness."

Education and industry

Where the public-school term in the United States is longest, there the average productive capacity of the citizen is greatest. This can hardly be a coincidence. When the man of science finds such a coincidence as this in his test-tube or balance, he proclaims it a scientific discovery proved by inductive evidence. The average school period per inhabitant, taking the United States as a whole, was, in 1897, 4.3 years. The average school period for Massachusetts is 7 years. The proportion, therefore, between the school period in that State and the school period in the whole United States is as 70 to 43. It is very interesting to note that the proportion between the productive capacity of each individual in Massachusetts and that of each individual in the whole United States is as 66 to 37. Education, 70 to 43; productivity, 66 to 37. On the basis of 306 working-days in Massachusetts, and on the basis of a population something over 2,000,000, this means that every citizen of Massachusetts—man, woman, infant in

arms—is to be credited with a productive capacity every year of $88.75 more than the average for the United States as a whole. Or to put it in the most striking fashion, it means that the excess of productive capacity for the State of Massachusetts in one year is $200,000,000, or about 20 times the cost of maintaining the public schools. If the State of North Carolina, for example, could bring it about through education that every individual's productive capacity was increased 10 cents a day—that is, just one-third the Massachusetts excess—for 306 working-days, estimating the population roughly at 1,750,000, the State would be better off in the next calendar year to the amount of $54,000,000. If the increase could equal the Massachusetts excess of 29 cents, North Carolina would be better off to the extent of $160,000,000. North Carolina now spends less than $1,000,000 a year for public education.

Public secondary education

The number of public secondary schools, high schools, in the United States in 1897–8 was 5,315, employing 17,941 teachers and enrolling 449,600 pupils. Nearly 3,000 of these schools (2,832) were in the North Central States. The rapid increase of these schools, the flexibility of their programme of studies, and

the growing value of the training which they offer are among the most significant educational facts of the last two decades. The present rate of increase of secondary school pupils is nearly five times as great as the rate of increase of the population. It is noteworthy, too, that nearly 50 per cent (49.44) of the whole number of secondary school pupils are studying Latin. The rate of increase in the number of the pupils who study Latin is fully twice as great as the rate of increase in the number of secondary school students.

Between 1890 and 1896, while the number of students in private secondary schools increased 12 per cent, the number of students in public secondary schools increased 87 per cent. Further, since 1893–4 the number of pupils in private secondary schools has steadily declined.

Local influence of the college

The number of colleges in the United States —472, excluding those for women only—is very large. Many of these institutions, small and weak, ill-equipped and ill-endowed, are frequently criticised severely for endeavoring to continue the struggle for existence. This criticism is, in part, justifiable, but it ought not to be forgotten that almost every college exerts a helpful influence upon the life of its locality.

The fact is frequently overlooked that all American colleges depend for their students in large measure upon their own neighborhood. Few draw from the nation at large, and these few draw only a small proportion of their students from beyond the confines of their own State or the limits of their own section of the country. For example, of the 28,000 (27,956) students attending colleges in the North Atlantic division, 26,393, or 94.41 per cent, are residents of the States included in that division. Of the 8,529 students in colleges of Massachusetts, 55.62 per cent are residents of that State, and 83.37 per cent are residents of the North Atlantic division, of which Massachusetts is a part. In Oregon the percentages rise to 96.09 and 99.87, respectively.

American universities

The development of universities in the United States has taken place during the present generation. The name "university" is, in America, no proper index to the character and work of the institution which bears it. Professor Perry has set out illustrations of this fact with great clearness.[1] Nevertheless, the distinctions between secondary school, college, and university are more widely recognized each year, and it is not too much to hope that,

[1] *Education in the United States* (New York, 1910), I : 254.

in course of time, the various institutions will adopt the names which properly belong to each.

The definition of a university which I have suggested elsewhere[1] is this: "An institution where students, adequately trained by previous study of the liberal arts and sciences, are led into special fields of learning and research by teachers of high excellence and originality; and where, by the agency of museums, laboratories, and publications, knowledge is conserved, advanced, and disseminated." In this sense there are at least half a dozen American universities now in existence, and as many more in the process of making. These universities are markedly different from those of France, Germany, and Great Britain, but they respond in a most complete way to the educational needs of the American people, and they are playing an increasingly important part in the advancement of knowledge and the development of its applications to problems of government, of industry, and of commerce. The administrators of American universities have studied carefully the experience of European nations, and they have applied the result of that experience, wherever possible, in the solution of their own problems.

[1] See p. 265.

Literature of education

The variety and value of American contributions to the literature of education are worthy of notice. Nearly 300 periodical publications of one type or another are devoted mainly to education. A few of these rank with the leading educational journals of the world. Perhaps the publications of the National Educational Association, a voluntary organization of teachers of every grade, are the most characteristic American contributions. They include not only the invaluable series of annual *Proceedings*, containing papers and discussions by the leaders of American education for a generation, but reports upon particular subjects the investigation of which has been undertaken from time to time by special committees. Among the subjects so reported upon are these: Secondary school duties, organization of elementary education, rural schools, college-entrance requirements, relation of public libraries to public schools, and normal schools.

The most valuable official publications are these: the annual reports, issued since 1868, by the United States commissioner of education, those since 1889 being particularly noteworthy; the reports issued by Horace Mann as secretary of the State board of education

of Massachusetts, 1838–49; the twelve volumes of reports issued by William T. Harris, as superintendent of the public schools of St. Louis, Missouri, 1867–79; and the annual reports of Charles W. Eliot as president of Harvard University, 1871–99. The annual reports of State and city superintendents of schools are a storehouse of information and often contain elaborate discussions of educational theory and practise.

Private aid to education

One fact in American education is certainly unique. That is the vast sum given in aid or endowment of education by individuals. It recalls the best traditions of the princes and churchmen of the Middle Ages, but is on a vastly larger scale. For some time past the income of Harvard University from this source has been nearly or quite a million dollars annually. In 1898–9 the total amount of gifts to Harvard University for purposes of general or special endowment was $1,383,460.77, and for immediate use $161,368.90. Columbia University has received in the last decade $6,736,482 in money and in land. An unofficial estimate of the amount given by individuals during the year 1899 for universities, colleges, schools, and libraries is over $70,000,000. The tendency which these colossal figures

indicate is one of the most fortunate and most hopeful in American life. The makers and holders of great fortunes are pouring out from their excess for the development of the higher life and greater productive capacity of the people. The religious bodies, in particular the Roman Catholic Church, are doing the same thing upon a very large scale. The conviction that education is fundamental to democratic civilization is perhaps the most widespread among the American people. Public funds and private wealth are alike given unstintingly in support of it.

Study of education

Education, conceived as a social institution, is now being studied in the United States more widely and more energetically than ever before. The chairs of education in the great universities are the natural leaders in this movement. It is carried on also in normal schools, in teachers' training classes, and in countless voluntary associations and clubs in every part of the country. Problems of organization and administration, of educational theory, of practical procedure in teaching, of child nature, of hygiene and sanitation are engaging attention everywhere. Herein lies the promise of great advances in the future. Enthusiasm, earnestness, and scientific method

are all applied to the study of education in a way which makes it certain that the results will be fruitful. The future of democracy is bound up with the future of education.

XVIII

DISCIPLINE AND THE SOCIAL AIM OF EDUCATION

A paper read before the American Academy of Arts and Letters at Boston, Massachusetts, November 19, 1915

DISCIPLINE AND THE SOCIAL AIM OF EDUCATION

Training implies purpose

All training implies an end or purpose. The systematic development of knowledge and capacity, and the systematic formation of habits of thought and of action, would have no significance or value unless they aimed to accomplish some definite result. Moralists and political philosophers have toiled for ages to formulate and to define an end or object of training and discipline, and the result is some of the most illuminating and inspiring of the world's literature.

Form of training determined by one's philosophy of life

A moment's reflection will make it plain that the purpose of training and of discipline will depend upon the philosophy of life which controls our thinking and our action. If one's philosophy of life, so called, is to have no philosophy, but only to try to deal with each situation as it arises and to make the best of it, then the end and purpose of training will be simply that one may drift aimlessly about on a sea which he has no instruments to measure, and be borne by currents which he has no

power to divert or to withstand. It is apparent, too, that under the influence of a system of caste, or of a uniform religious belief, or of an all-controlling national aim or purpose, discipline and training will be given a precise and definite form. The younger generation will be taught either to feel the force of the caste distinctions and to enter into a caste with all that implies, or to accept the formulas and the ritual of a religion to which it gives inherited adherence, or to subject itself to the legally organized powers and organs of the state and to do their will uncomplainingly and as effectively as possible.

The common school a product of democracy

For the great modern democracies, no one of these ends or aims of discipline is possible, since these democracies rest upon the principles of equality before the law and of opportunity open freely to talent of every kind. The purpose and function of discipline in a democracy are necessarily quite different from those that approve themselves in an absolute monarchy or in a nation which accepts the principles that the state is different from, and superior to, the individuals that compose it, and that it is not subject to the moral and legal limitations which bind the individual. Membership in such a state is not citizenship but subordination. Such

a state may attain, for a time at least, a high degree of social and political effectiveness, but this effectiveness will be gained at the cost of civil liberty; and the price is far too high to pay. The educational system of a nation which accepts a form of political philosophy such as this will naturally aim at two things. It will aim to train the few for effective leadership and it will aim to train the many for effective subordination. It will fix a substantial barrier between those schools and institutions which train for leadership and those schools and institutions which train for subordination. This subordination may be political, or it may be social, or it may be economic, or it may be military, but if it exists there can be no such thing as common schools in the nation. The conception of common schools and the very name itself are the product of the social philosophy of democracy. The common school is not and cannot be a class school. It is a school for the children of the whole people in which they are to be given that instruction and that discipline which lay the foundations not for leadership in a state and not for subordination in a state, but for citizenship of a state; and these are the same for all.

The ethical and the social aims of education

are accomplished in part by example, in part by precept, and in still larger part by practise. The inculcation of virtue by precept is far less effective than the inculcation of virtue by example, and the inculcation of virtue by example requires for its completion the habitual practise of that virtue by the pupil. This explains why, in the elementary and secondary schools, so little attention is paid to formal instruction in morals and in duties, and why so much emphasis is properly laid upon the personality of the teacher and upon the actual behavior and habits of the pupils.

Discipline and democracy

The problem of discipline in the educational system of a democracy is the world-old problem of reconciling liberty with order, progress with permanence, and government with justice. Not until mankind is itself perfect will this problem be finally and completely solved. The pressing question that now arises to perplex the democracies of the world is how to secure increased national effectiveness without the sacrifice of liberty, how to move forward toward the attainment of a national purpose without calling upon the agents and organs of despotism to take command. In other words, the question is how to reconcile the civil liberty of the individual with an increasing degree of

national organization for national needs and with a steadily increasing sense of individual responsibility for a collective purpose or policy. This is the precise topic which most concerns the philosophers of to-day who would throw light upon the difficult problems of the moment as these arise in education, in ethics, and in politics.

It is of the essence of democracy that every individual shall be called upon to do the best that is in him and to do this in such manner as not to limit the similar right and the equal opportunity of every other individual to do the same. Therefore, each individual's share in collective action or in the accomplishment of a collective purpose must be something which he imposes upon himself, and not something which is imposed upon him by force from without or by the authority of other wills than his own. The abnormal or atypical individual must, of course, be dealt with in abnormal and atypical ways, but the normal human being must be called upon to become responsible for himself and to render service to the community as his own free act and not in response to the compulsion of another.

The despotism of a majority

There can be no dispute as to the fact that society is composed of individuals, but there appears to be wide difference of opinion as to

the relation in which society should stand to the individuals who compose it. There are those who, confident of the wisdom of their own opinions and judgment, impatient of the slow sagacity of nature, and dissatisfied with the imperfect results of education, would extend the rule of compulsion over the conduct and habits of men from the necessary to the merely expedient, and from the highly important to the trivial and insignificant. It is just now a common observation that whenever a majority, however fickle or however fortuitous, can be obtained in support of a given restriction upon others which commends itself to their own judgment or their own feelings, they will promptly impose that restriction upon all men within reach of their authority, quite regardless of its ultimate moral and social effects. This is the disposition which, for many centuries, has been responsible at one time or another for sumptuary legislation of various kinds, and for the annoying and foolish restrictions which have from time to time been imposed upon men without any permanent result other than to make clear the unwisdom of the principles and policies which guide such action. This is the danger that is always present in those movements which, to those who are enthusiastic in

their support, and frequently high-minded, appear to make for moral and economic progress and prosperity, but which in reality have an opposite effect because they extend the area of compulsion over conduct.

Individualism, collectivism and institutionalism

Sound discipline has a higher social aim than this and it proceeds by a quite different method. It takes its start from the capacity and the educability of the individual. Upon this it makes the most rigorous and insistent demands. It aims to develop personality, self, to the utmost, but it aims to develop it as selfhood and not as selfishness. The gap between selfhood and selfishness is as wide as the gap between a sound and an unsound individualism. Unsound individualism errs on its side as completely as does collectivism on the other side. The one means an eventual anarchy where right is determined by the rule of might; the other means a stagnation where right is determined by tradition and by custom. Between the two, sharing the advantages of individualism and of collectivism alike and avoiding the evils of both, lies that form of political and moral philosophy which, for lack of a better term, may be called institutionalism. This philosophy teaches that the individual finds his completion and his satisfaction in willing membership in the social

whole with all the obligations that such membership brings as to human service and as to collective responsibility.

Institutionalism finds in the family, in the church, in the state, in private property, in science, in literature, and in the fine arts those institutions and undertakings which represent the striving of human personality toward the goal of self-expression and attainment. No one of these institutions or undertakings is static or fixed, but each one of them reveals in history a process of development which appears to be toward greater perfection and the increasing satisfaction of man. Where, as in the case of the church, of literature, and of the fine arts, there seem to be exceptions to this rule, inasmuch as an astounding standard of perfection was reached in the early stages of western civilization, there is much food for reflection. It may, perhaps, be true that some of the more subtle and imaginative forms of human expression and achievement are as well able to approximate perfection in their earliest manifestations as after a long course of development.

Discipline and personality

It is in these institutions and undertakings that man finds that larger education which life superimposes upon the discipline and training of the school. It is through participation in

these institutions and undertakings and, in the case of exceptional men, through contribution to our knowledge of them or through furthering their development, that personality finds its highest expression and its fullest satisfaction. A person is, as Kant long ago pointed out, not a means to an end; a human person is an end in himself. The enriching of one's own personality is the real basis for human service and for bearing a share of collective responsibility. The objective goods that may follow from human service and from collective action are, of course, highly important, but the subjective results in the minds and characters of the individuals who participate in them are more important still.

Autocracy and an all-powerful non-moral state have demonstrated that they can obtain and manifest a marked degree of national efficiency. It remains for democracy to prove that it can do the same, or it will eventually succumb before a more effective type of national organization in which true civil liberty is unknown.

Democracy and efficiency

The difficulties of democracy are the opportunities of education.[1] It is for the educational

[1] See Butler, *True and False Democracy* (New York, 1907), p. 100.

system of a really free people so to train and discipline its children that their contribution to national organization and national effectiveness will be voluntary and generous, not prescribed and forced.

The service and the sacrifice which are the results of a self-imposed limitation are worth many times the service and the sacrifice that follow prescription and compulsion. The moment that we substitute for an autonomous will, a will that is self-directed, an heteronomous will, a will that is directed by others, we have treated the human being not as a person, but as a thing; we have substituted mechanism for life.

The early training and discipline of the child are for the purpose of teaching his will to form itself, to direct itself, to walk alone. Fortunately, the child is not asked to begin his life at the point where the race began, but he is offered through the family, the church, and the school the benefits of the age-long experience of the race and of its inherited culture and efficiency. These are offered him not as rods for chastisement or formulas for repression, but rather as food upon which to grow and as a ladder upon which to climb. If the process of training and discipline has been wisely ordered,

the child will come to the end of his formal training not only with keen appreciation of what has been done for him, but with eager anticipation of the opportunity that lies open before him. It is the merest sciolism to suppose that each child can or should construct the world anew for himself. His own reactions, his own experiences, his own appreciations, his own reflections are only important as part of a process, and that process is his growing into an understanding of what the world has been and is, in order that through participation in it he may strive to alter it for the better.

Education and the ideal state

The ideal society and the ideal state is not one ruled by a despot, by a military caste, or by a controlling oligarchy, however beneficent these may be, or however efficiently organized the masses whom they order and control. The ideal society and the ideal state is a democracy in which every man and every woman is fitted to be free, to put forth the best possible effort in self-expression through participation in the great human institutions and undertakings that constitute civilization, and in service to others like-minded with themselves. This is the social aim of a soundly conceived education. To its accomplishment, all training, all discipline, all vocational preparation, all scholar-

ship are intended to lead. If they do not accomplish this, they are futile. ("For what shall it profit a man, if he shall gain the whole world, and lose his own soul?")

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